

**Council Members**  
S. Paige Bowers  
Lynne O'Dell Chapman  
Joe N. Moss  
W. Daniel Evatt II  
Kenneth D. Dill  
Harrison H. Holladay, Jr.



1067 West Main Street · Post Office Box 549  
Central, South Carolina 29630  
Phone (864) 639-6381  
Fax (864) 639-1252

*R04-20-C-017*  
**Mayor**  
Clyde J. "Mac" Martin  
  
**Administrator**  
Phillip D. Mishoe  
  
**Town Clerk**  
Susan A. Brewer

1. Applicant Identification  
Town of Central  
1067 W. Main Street  
PO Box 549  
Central, SC 29630
2. Funding Requested
  - a. Grant Type: Multiple Site Cleanup
  - b. Federal Funds Requested
    - i. \$149,337.50
    - ii. Not Applicable
  - c. Contamination: Hazardous Substances
3. Location  
a) Town of Central b) Pickens County c) South Carolina
4. Property Information
  - a. Central Garage  
704 W. Main Street  
Central, SC 29630
  - b. Central Laundromat  
703 W. Main Street  
Central, SC 29630
  - c. Public Health Building  
225 Broad Street  
Central, SC 29630
5. Contacts
  - a. Project Director  
Mr. Phillip Mishoe, Administrator  
Phone: 864-639-6381  
Email: mishoe@cityofcentral.org  
1067 W. Main Street  
Central, SC 29630

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- b. Highest Ranking Elected Official  
 Mayor Clyde J. "Mac" Martin, Jr.  
 Phone: 864-639-6381  
 Email: mmartin205@aol.com  
 1067 W. Main Street  
 Central, SC 29630

6. Population  
 General Population – Town of Central 5,161 US Census American Community Survey 2013-2017

7. Other Factors Checklist

<b>Other Factors</b>	<b>Page #</b>
Community population is 10,000 or less.	1
The applicant is, or will assist, a federally recognized Indian Tribe or United States territory.	NA
The proposed brownfield site(s) is impacted by mine-scarred land.	NA
Secured firm leveraging commitment ties directly to the project and will facilitate completion of the project/reuse; secured resource is identified in the Narrative and substantiated in the attached documentation.	3
The proposed site(s) is adjacent to a body of water (i.e., the border of the site(s) is contiguous or partially contiguous to the body of water, or would be contiguous or partially contiguous with a body of water but for a street, road or other public thoroughfare separating them.)	NA
The proposed site(s) is in a federally designated flood plain.	NA
The reuse of the proposed cleanup site(s) will facilitate renewable energy from wind, solar, or geothermal energy; or will incorporate energy efficiency measures.	2 & 3

8. Letter from the State or Tribal Environmental Authority: See attached



# Letter from State Environmental Authority



November 12, 2019

Brian Gross  
Region 4 Brownfields Coordinator  
United States Environmental Protection Agency  
Resource Conservation and Restoration Division  
61 Forsyth Street SW  
Atlanta, Georgia 30303-8960

RE: EPA Brownfields Cleanup Grant  
Town of Central, South Carolina

Dear Mr. Gross:

The South Carolina Department of Health and Environmental Control, the State's environmental authority, acknowledges and fully supports the Town of Central's application for a Brownfields Cleanup Grant. The grant will focus on cleanup of the Central Garage, Central Laundromat, and Public Health Building Properties. These properties have been assessed under the Town's 2016 Community-wide Assessment grant.

The Department appreciates your consideration of the application and hopes for a favorable outcome. Your positive response will assist the Town in its efforts to revitalize properties in the community. If you have any questions or need additional information, please contact Robert Hodges of my staff at (803) 898-0919.

Sincerely,

A handwritten signature in blue ink, appearing to read 'H. Porter'.

Henry Porter, Chief  
Bureau of Land and Waste Management

cc: Liz, Basil, BEHS  
Robert Hodges, Manager, Brownfields Program



# Narrative



## **1. PROJECT AREA DESCRIPTION AND PLANS FOR REVITALIZATION**

**a. Target Area and Brownfields i. Background and Description of Target Area:** On September 28, 1873 the Atlantic & Richmond Railroad Company completed the connecting link at the mid-point of their line extending from Atlanta to Charlotte. A village grew at this centralized location as the railroad company established their offices and a depot here, which later became known as the Town of Central (population 5,161).<sup>1</sup> The flood of newcomers associated with the railroad boom brought prosperity and growth to the area as shops, hotels, restaurants, and other businesses began to appear. To support the railroad boom, the railroad company oversaw the construction of depots, coal yards, a railroad turntable, locomotive repair shops, and other support facilities primarily along the Railroad Corridor. Life was terrific in the Town of Central (Central) until the railroad company relocated their operations in 1897, causing the closure of all railroad shops and offices. Trains still passed through town, but no longer stopped for refueling or repairs. Houses were left vacant as railroad employees were relocated. Shops, hotels, and restaurants saw their businesses dwindle. In the early 1900s, the establishment of Issaqueena Textile Mill and founding of Southern Wesleyan University brought new growth to Central. Unfortunately, this growth was short-lived as the stock market crash of 1929 caused the ownership of Issaqueena Mill to change hands, Central's two banks to fail, and signaled the decline of the textile boom which continued through the late 20th century. Central has seen a significant decline in local manufacturing jobs including the loss of 250 jobs in April 2019 due to the Shaw Industries Plant closure.

The Targeted Area of focus for this grant application is the **Railroad Corridor** (Unless otherwise noted, local demographics are drawn from data for the Town of Central). Not only is this area historically significant and a gateway to the community, it is also the commercial heart of Central. Remnants of Central's railroad culture are still found along this corridor, as well as filling and service stations, dry cleaners, industrial properties, and other businesses which have come and gone leaving their impactful marks along Central's Railroad Corridor.

**ii. Description of the Brownfield Sites:** The three sites that were identified for cleanup during Central's assessment grant were selected based on community input, redevelopment potential, economic and community impact, and health and welfare benefits to the community. **Site 1 - Central Garage (704 West Main St):** This 0.5-acre site, located in downtown along Main Street, was a service station from 1949 until late 1998. The site has been largely vacant since 1998, though a tow truck was occasionally parked on site. A 2018 Phase I Environmental Site Assessment (ESA) of the property identified the following Recognized Environmental Conditions (RECs): four underground storage tanks (USTs), three hydraulic lifts, two waste oil above-ground storage tanks, and a drainage system. An asbestos containing materials (ACM) & lead-based paint (LBP) survey of the lone site structure identified ACM including floor tile and mastic, vinyl flooring, window glazing, plaster, and flashing, and LBP on surfaces including doors, window and door frames, and block walls. Central enrolled the site in the South Carolina Department of Health and Environmental Control (SCDHEC) Voluntary Cleanup Program (VCP) and completed a Phase II ESA, which included removal of the USTs and hydraulic lifts and identified; volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and the polychlorinated biphenyl Aroclor 1260 (not subject to TSCA involuntary action) were identified in soil, groundwater, and/or soil gas; however, based on the planned site reuse and VCP requirements, these impacts will be managed through deed restrictions and a media management plan; however, ACM and LBP remain a barrier to redevelopment. **Site 2 - Central Laundromat (703 West Main St):** This 0.5-acre former laundromat and used car lot site is located along Main Street across from the Central

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<sup>1</sup> 2013-2017 American Community Survey – US Census



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Garage. The lone structure once housed coin operated washers and dryers. A used car lot once operated on the southern portion of the site. No operations are currently conducted at the site. A 2018 Phase I ESA identified the following RECs: potential groundwater impacts from the upgradient Central Garage, a pile of building debris and machine parts, and numerous automobiles in various states of disrepair once located on site. An ACM & LBP survey identified ACM including wall/ceiling texture, window caulking, and edge flashing, and LBP on surfaces including a metal canopy, block walls, and metal roof capping. Central enrolled the site in the SCDHEC VCP and completed a Phase II ESA which identified no impacts to soil, groundwater, or soil gas warranting corrective action; however, ACM and LBP remain a barrier to redevelopment. **Site 3 - Public Health Building (225 Broad St):** This site is a former public health center that operated from the 1950s-1990s. Since then, the building has largely remained vacant. Central acquired the site through “abandonment” in 2017. A June 2019 Phase I ESA identified a heating oil UST. An ACM & LBP survey identified ACM including floor tile/mastic, insulation, door gaskets, and window glazing and caulking, and LBP on surfaces including plaster, wall tile, doors/door frames, and structural steel. Assessment and removal of the UST is planned for early 2020. If a release is identified during removal, corrective measures will be completed using the SCDHEC State Underground Petroleum Environmental Response Bank (SUPERB) and town funds.

**b. Revitalization of the Target Area** i. Reuse Strategy and Alignment with Revitalization Plans: Central has implemented a Downtown Revitalization Initiative to encourage redevelopment and investment in the Railroad Corridor target area. Revitalization goals include **improving downtown, encouraging business development and job creation, creating opportunities for healthy living and recreation, providing alternative transportation options, and improving infrastructure**. The Central Community Engagement Committee (CEC) was established by community members and leaders to serve as community ambassadors. As part of revitalization planning, conceptual plans were developed based on community and stakeholder input. The plans were presented to the community during a CEC meeting in May 2019 and feedback was requested. The plans received a positive response and has ignited a spark in community members who were already encouraged by the opportunities and hope provided by Central’s Brownfields Program.

A developer has plans to redevelop the **Central Garage** site into a café that utilizes fresh, local food to support a sustainable food system while providing a community space celebrating Central’s “small town” history. This reuse will **improve downtown** by reducing blight, **encourage business development and job creation** by redeveloping the vacant facility into a profitable business, and **create opportunities for healthy living and recreation** by providing healthy, local food options for the community directly aligning with Central’s established redevelopment goals.

Central will redevelop the **Central Laundromat** site as a parking area as the downtown is in desperate need of additional parking. This reuse will provide for that need and will **encourage business development and job creation** by removing a blighted property and bringing in visitors who avoid the area due to limited parking and **improve infrastructure** by creating new transportation infrastructure. Also, Clemson Area Transit (CAT) has committed to establish a bus stop at the site utilizing 100% battery powered buses, **providing alternative transportation options** to the target area residents and students attending nearby Clemson University and Southern Wesleyan University (SWU), many of which reside in Central and **improving infrastructure** through the creation of a bus stop. The third use will be an access point for the Green Crescent Trail (GTC) to be developed through a partnership between the non-profit Friends of the GTC and the local municipalities and colleges/universities. This reuse will **create opportunities for healthy living and recreation, provide alternative transportation options,**





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and **improve infrastructure** by creating trail access, and **encourage business development and job creation** by encouraging locals who prefer walking, running, or biking to visit downtown for both work and play directly aligning with Central's established redevelopment goals.

The **Public Health Building** will be reused as headquarters for Central's recently formed Main Street Program and will include parking with trail access to Central's adjoining athletic fields. This redevelopment will **improve downtown** and **encourage business development and job creation** by creating facilities for Central's Main Street Program, **create opportunities for healthy living and recreation** by increasing access to recreational facilities, and **improve infrastructure** in the form of additional parking directly aligning with Central's established redevelopment goals.

ii. Outcomes and Benefits of Reuse Strategy: Redevelopment at all three sites will create economic and non-economic benefits which will positively impact the entire community. In addition to the anticipated **10 jobs created** by redevelopment of the Central Garage Site, the reuse will provide healthy, local food options for the community. This is important since Central is located in a census tract **considered a food desert** (CT45077011101) by the USDA.<sup>2</sup> Creation of a **headquarters for the non-profit Main Street Program**, whose goal is to build up the business and image of Central's Railroad Corridor, will greatly benefit community and economic development. Increased transportation options, including a bus stop incorporating 100% battery powered buses, and improvements to transportation infrastructure and the aesthetics of downtown will result in more downtown visitors, including tourists, who will utilize local businesses. By creating a welcoming environment and desirable amenities, Central hopes to capitalize on local attractions and tourism instead of being overlooked by those who see an unsafe community full of blight. The region has become a **top regional and national tourist destination** attracting sports and outdoor enthusiasts year-round. Sports/entertainment venues represent the largest annual tourism draw to the region, including **Clemson University, the area's largest economic engine** located 3.5-miles from Central. In 2017, Clemson University generated **\$4.6 billion in overall economic impact** to the state.<sup>3</sup> South Carolina tourism is a **\$15 billion per year industry** supporting one out of every ten jobs in the state and produces more than **\$1.2 billion in local and state tax revenues**.<sup>4</sup> Creating a hospitable atmosphere will result in non-economic benefits such as the health benefits from increase use the trail system to explore Central. While Central is not located in an Opportunity Zone (OZs), **two federally designated OZs are located within three miles of the target area**. Being located in close proximity to the OZs, one can expect that as the economy of Central grows redevelopment will happen in the adjacent OZs.

c. **Strategy for Leveraging Resources** i. Resources Needed for Site Reuse: Central is eligible for numerous local, state, and federal grant opportunities such as Appalachian Regional Commission grants that can be used for reuse and redevelopment, Community Development Block Grants (CDBG) that can be used for demolition of unsafe structures and site redevelopment, Municipal Association of SC grant that can be used for redevelopment and renovation, and Pickens County Accommodation Tax (PCAT) grants that can be used for tourism related projects. In addition, Central has access to the SC State Revolving Loan Fund should additional funding be needed for cleanup activities. Ms. Julie Columbus, a private developer, is in negotiations with Central to purchase and fund redevelopment of the Garage site. Pickens County has pledged equipment and manpower to complete the demolition of the dilapidated structure on the Laundromat site. A PCAT Grant and funds from the sale of the Garage site will be used to redevelop the Laundromat site with remaining funds from the sale used to renovate the Public Health Building.

<sup>2</sup> USDA Food Access Research Atlas (<https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/>)

<sup>3</sup> <https://www.clemson.edu/about/did-you-know.html>

<sup>4</sup> The Economic Contribution of Tourism in South Carolina: 2010 Tourism Satellite Account Results, US Travel Association





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ii. Use of Existing Infrastructure: Significant infrastructure upgrades were recently completed to prepare Central for growth and revitalization such as the recent upgrade to the aging sewer system. The priority sites are infill locations with sufficient existing utility infrastructure to accommodate redevelopment. The redevelopment of the laundromat site will create new transportation infrastructure (parking, bus stop, and trail access). Although infrastructure upgrades are not anticipated, Central will identify, acquire, and successfully implement grant funding as needed.

**2. COMMUNITY NEED AND COMMUNITY ENGAGEMENT**

a. **Community Need** i. The Community's Need for Funding: Central's economic conditions are substantially distressed in comparison to local and national conditions. The most telling statistic is **Central's poverty rate of 40.8%** more than twice that of the County (18.3%), State (16.6%), and United States (14.6%).<sup>5</sup> A high number of manufacturing job losses has contributed to a **10.8% unemployment rate** (7.2% State/6.6% National) and **median household income of only \$26,623** (\$48,781 State/\$57,652 National), resulting in lower tax revenues.<sup>5</sup> **Gross sales in the County declined by nearly \$50 million from 2017 to 2018.**<sup>6</sup> While gross retail sales in Central have decline significantly, South Carolina benefited from a 2.3% increase during the same period.<sup>6</sup>

Central has gone to great lengths to promote revitalization of the targeted area, including through their Brownfields Assessment Grant, which has started the momentum moving in a positive direction; however, with a large number of vacant, blighted properties contributing to low property values and reduced property tax revenues, Central's revenue base continues to suffer. As economic conditions continue to worsen and with Central operating on marginal revenues which are barely enough to cover basic government services, Central simply does not have the funding to address the environmental concerns to breathe life back into these once thriving properties. The area has already experienced newfound interest from private development resulting from the Brownfields Program. Central hopes to continue this momentum by addressing the environmental issues on these blighted sites; reinvigorating the community and inspiring investment and growth in Central.

ii. Threats to Sensitive Populations (1) Health or Welfare of Sensitive Populations: Within Central, sensitive populations include minorities and women. **Women of childbearing age (15-44) make up a staggering 60.4%** of the total female population compared to 39% nationwide.<sup>5</sup> With such a high percentage of women of childbearing age, removal of environmental exposure risks such as lead which is known to cause birth defects, providing access to healthy food options in an area classified as a food desert, and providing recreational opportunities in an area with obesity concerns, is crucial for the health and wellbeing of mothers-to-be and future generations.

**Non-white minorities make up 26%** of Central's population, more than double that of the County (11.3%).<sup>5</sup> As the American Cancer Society reports, minorities have a significantly higher cancer mortality rate. In an area with a high incidence of deaths associated with cancer, addressing carcinogens is important for community health and wellbeing, especially for the minorities that make up more than ¼ of the total population. Removal of environmental exposure risks such as asbestos, a known carcinogen, and a reduction in vehicle emissions by providing transportation alternatives will directly reduce the number of carcinogenic sources in the community.

In 2015, the property **crime rate in Central was 154.14% higher than the national rate.**<sup>7</sup> The high density of vacant, blighted properties contributes to economic and financial conditions that create a perpetual cycle of low quality of living conditions which can have a significant impact on the health and welfare of a community, especially on sensitive population groups. Blighted properties, a haven for illegal and illicit activities, have a profound impact on crime in the

<sup>5</sup> 2013-2017 American Community Survey – US Census

<sup>6</sup> SC Department of Revenue Annual Reports 2016-2017 and 2017-2018

<sup>7</sup> <https://www.cityrating.com/crime-statistics/south-carolina/central.html>



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community. High levels of crime discourage locals from venturing out into the community, resulting in a less active populace. Reducing blight in the community will reduce opportunities for crime to occur, making the community feel safer and more willing to explore Central.

(2) Greater Than Normal Incidence of Disease and Adverse Health Conditions: The target sites pose a great risk to community health. Central is in the 67<sup>th</sup> percentile or higher nationally for all eleven Environmental Justice Screening Indicators (US EPA EJScreen tool), including 80<sup>th</sup> percentile for Particulate Matter, 79<sup>th</sup> percentile for Air Toxics Cancer Risk, and 78<sup>th</sup> percentile for Respiratory Hazard Index.<sup>8</sup> Exposure to contaminants such as petroleum, solvents, asbestos, and metals, lead to increased rates of cancer and asthma, and indirect risks such as blight and crime discourage outdoor activity leading to sedentary lifestyles. In Pickens County, **the leading cause of death is heart disease followed by cancer and chronic lower respiratory disease** and 65.5% of residents are obese or overweight and 22.4% receive no regular exercise.<sup>9</sup> Obesity disproportionately affects minorities and the impoverished; Central has a high percentage of both (26% minority; 40.8% poverty rate).<sup>10</sup> According to the Community Health Needs Assessment, asthma prevalence is increasing in Pickens County and children are disproportionately impacted by asthma, the leading chronic disease for children and largest reason for missed school days.<sup>9</sup> In 2018, 28.1% of deaths in Pickens County were cancer related with breast, prostate, and lung cancer being the most prevalent forms.<sup>9</sup> In 2018, congenital malformations and deformations and disorders related to short gestation and low birthweight were the leading causes of infant death in South Carolina accounting for over 45% of neonatal deaths.<sup>11</sup> Remediation of the target sites, primarily impacted by asbestos containing materials and lead-based paint, will remove the direct exposure risks which are known to contribute to respiratory disease and cancer, and redevelopment of the sites will provide: healthy food options through the redevelopment of the Garage into a café providing fresh, locally sourced foods; recreational opportunities through redevelopment of the Laundromat and Public Health Building sites will provide recreational facility and trail access; and increased transportation options helping to reduce emissions in a community where 87.2% of commuters report driving alone to work.<sup>10</sup>

(3) Disproportionately Impacted Populations: From its start as a railroad town, the rise and fall of the textile industry, to traces of modern manufacturing, there is no doubt Central has experienced industry's benefits and the negative environmental consequences left behind, from the garages, dry cleaners, and other operations that have kept Central running since 1873. In those 146 years since the railroad company set up shop in Central, commercial, industrial, and governmental policies and operations have changed drastically with profound effects on the environment. Waste disposal practices transitioned from "out the back door/down the drain" practices to modern practices, but their legacy has created environmental concerns posing substantial risk to the community's sensitive populations including women of childbearing age and minorities, especially considering the high percentage of neonatal deaths in South Carolina due to birth defects, short gestation, and low birth weight (45%).<sup>11</sup> Buildings constructed of asbestos containing materials, once highly regarded for its light weight and insulating properties, lined the streets of Central. Many of those structures remain, presenting environmental hazards in a community already at risk for respiratory disease and cancer. The economy continues to languish in a community with a 10.8% unemployment rate, median household income of \$26,623, and where **2 in 5 people live in poverty**.<sup>10</sup> New business and industry will not take root in an area

<sup>8</sup> US EPA EJScreen ([https://ejscreen.epa.gov/mapper/ejscreen\\_SOE.aspx](https://ejscreen.epa.gov/mapper/ejscreen_SOE.aspx))

<sup>9</sup> 2018 AnMed Health Community Health Needs Assessment – Anderson and Pickens Counties

<sup>10</sup> 2013-2017 American Community Survey – US Census

<sup>11</sup> 2018 SC Residence Data – Infant Mortality and Selected Birth Characteristics



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where the negative environmental perception deters investors. The assessment of brownfields sites has started to slowly reverse these effects. Within weeks of their assessment (and some even before assessment), some of Central's most infamous environmentally stigmatized properties began to generate interest from developers. Central will continue the momentum by returning the target sites to reuse, thus planting seeds of change in the community leading to job creation, a prosperous economy, and healthy lifestyle options.

**b. Community Engagement** i. Project Partners & ii. Project Partner Roles: Below is a sampling of community organizations/stakeholders committed to Central's Brownfields efforts.

Partner Name	Point of Contact	Specific role in project
Vista Homes	Julie Columbus <a href="mailto:jcolumbus@ourvistahome.com">jcolumbus@ourvistahome.com</a>	Developer who plans to redevelop Garage property once remediated.
Clemson Area Transit	Keith Moody <a href="mailto:kmoody@cityofclemson.org">kmoody@cityofclemson.org</a>	Will develop "park and ride" and bus stop at Laundromat.
Community Engagement Committee (CEC)	Brandi Simmons <a href="mailto:bsimmons@phoenixcenter.org">bsimmons@phoenixcenter.org</a>	Will assist with outreach by hosting meetings/events to promote cleanup and redevelopment of the sites.
Pickens County	Michael Clark <a href="mailto:mclark@co.pickens.sc.us">mclark@co.pickens.sc.us</a>	Will provide demolition services at no cost for Laundromat site.

iii. Incorporating Community Input: Central will continue to solicit community feedback in making community and economic development decisions. Central's current Community Involvement Plan (CIP) guided recent outreach efforts associated with brownfields and redevelopment activities, and with a few updates, will guide future efforts. The CEC was created in January 2019 to provide effective communication to the community about upcoming town happenings. CEC has been involved in outreach associated with assessment and reuse planning within the Railroad Corridor, particularly the target sites, and will continue to work with the community and project partners to solicit input from the community. In addition to CEC's "boots on the ground" method, Central will use their website and local media to provide project updates and advertise project meetings to be held at critical project junctures and milestones. Three community meetings, which will provide opportunity for community input, are planned during this project, including project kick-off, prior to initiation of site activities, and at the completion of site activities. This project is anticipated to last approximately one and a half years with actual site work taking three to five months. It is unlikely that interim project update meetings will be required due to the short duration of site work. If there are non-English speaking persons present, a translator will be provided when needed. Input gathered from the community has been incorporated into the current redevelopment plans; however, additional input received will be evaluated throughout the redevelopment process and will be considered in redevelopment plans.

Central announced their intent to apply for cleanup funding for the Central Garage, Laundromat, and Public Health Building properties through the Journal, a regional newspaper, on November 9. At that time, a draft Analysis of Brownfields Cleanup Alternatives (ABCA) for each site and a draft of this proposal were made available for public review and comment at Town Hall on November 15<sup>th</sup> and a public meeting to solicit input was held on November 21<sup>st</sup>. Comments were accepted until November 29<sup>th</sup> and were incorporated into the documents.

### **3. TASK DESCRIPTIONS, COST ESTIMATES, AND MEASURING PROGRESS**

**a. Proposed Cleanup Plan**: A Draft ABCA was prepared for each target site. All three sites are impacted by asbestos containing building materials (ACM) and two sites are impacted by lead-based paint (LBP). Based upon effectiveness, implementability, and cost considerations, it was



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determined that pre-demolition removal/abatement of ACM is the best remediation procedure to address asbestos concerns on the three sites. This method addresses ACM liabilities, potential contaminant sources and potential limitations to future land use and brownfields redevelopment potential consistent with Central's goals and re-use planning. Utilizing standard industry practices, abatement areas would be contained prior to removal using polyethylene sheeting, controlled negative pressure and/or other applicable measures to prevent asbestos fiber migration beyond the work zone. Wet removals may be required to further control potential spreading of damaged or friable asbestos and airborne particulates. During and following the abatement, ACM dust, particulates and other residual materials would be vacuumed and filtered out using a high efficiency particulate air (HEPA) filtration system. ACM would be removed under an SCDHEC-approved permit and containerized for off-site landfill disposal as a special or regulated waste. The most common removal method is a "bag out" approach that uses labeled bags designed to contain ACM in manageable quantities. Leak-tight containers would be required if wet removals are performed. Landfill disposal authorizations specific to the disposal facility would be secured prior to initiating abatement work. ACM removal must be performed by a SC-licensed abatement contractor. In addition, this work requires a 10-business day notification and appropriate coordination with the SCDHEC Asbestos Section throughout the abatement project. An air monitoring program will be required for removal of friable or highly damaged ACM. Final clearance would be granted following a visual examination of the work area followed by receipt of acceptable air quality testing results for regulated ACM.

In addition to ACM, the **Central Garage** and **Public Health Building** are also impacted by LBP. Based upon effectiveness, implementability, and cost considerations, it was determined that the best remediation procedure to address LBP at the sites would be conventional abatement of LBP via removal of the interior plaster walls and ceilings and removal of lead-containing components such as ceramic tiles and interior doors/door frames using standard industry practices. LBP on exterior load bearing walls will be stabilized and encapsulated by scraping loose and peeling paint then applying a coat of encapsulant. Abatement areas would be contained prior to removal using polyethylene sheeting, controlled negative pressure and/or other applicable measures to prevent lead dust migration beyond the work zone. Some abatement procedures may require wet removals to further control dust. During and following the abatement, lead dust, particulates and other residual materials would be vacuumed and filtered using a HEPA filtration system. LBP would be removed and containerized for off-site landfill disposal as a special or regulated waste. Landfill disposal authorizations specific to the disposal facility would be secured prior to initiating the work. Several structural components containing LBP will remain in the structures such as structural steel, interior load bearing walls, exterior doors/frames, window sills/frames, and plaster and block walls. These components are to have any peeling paint stabilized and encapsulated.

Draft Abatement Project Designs for each site have been prepared by a SC Licensed Asbestos Project Designer. These designs, to be finalized prior to abatement events, provide specifications needed to procure abatement contractors, provide direction and guidance to project team members, and ensure that applicable state and federal regulations are followed throughout the project. For ACM and LBP components that are not planned for removal, whether they are encapsulated or non-friable and left in place, Operations and Maintenance (O&M) Plans will be developed to ensure that future site activities do not result in exposure or a release of these materials.

Assessment activities also identified impacts to soil, groundwater, and soil vapor at the **Central Garage** property; however, based on site reuse plans, SCDHEC's VCP has determined that these impacts can be effectively managed through deed and land use restrictions and a media





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management plan, which is currently under development, leaving the ACM and LCP as the remaining environmental impediments to redevelopment at this site.

Assessment activities at the **Public Health Building** site identified a heating oil UST. This UST will be removed and assessed in early 2020. If a release is identified during removal, Central will complete corrective measures using the SCDHEC SUPERB Program and city funding, if needed.

**b. Description of Tasks/Activities and Outputs**

<b>Task 1: Outreach</b>	
i.	Project Implementation: Central's qualified environmental consultant (QEC) will update the CIP and assist with development of outreach materials, which Town staff will review and finalize. Town staff will, with QEC support, lead community meetings to keep the community informed on project happenings. Supply budget is for printing of brochures and office supplies.
ii.	Anticipated Project Schedule: Initiated 0-3 months of award & continues through project
iii.	Task/Activity Lead(s): Town of Central Staff
iv.	Outputs: Updated CIP, 3 Community Meetings, Supplies, Outreach Materials
<b>Task 2: Planning</b>	
i.	Project Implementation: The QEC will finalize the ABCAs and Abatement Designs, prepare QAPPs and Health and Safety Plans (HASPs), and prepare O&M plans.
ii.	Anticipated Project Schedule: Initiated 4-8 months of award & updated throughout
iii.	Task/Activity Lead(s): Qualified Environmental Consultant
iv.	Outputs: 3 ABCAs, 3 Abatement Designs, 3 Site Specific-QAPPs & HASPs, 2 O&M Plans
<b>Task 3: Cleanup</b>	
i.	Project Implementation: This task includes proposed site cleanup activities including contractor mobilization, abatement and/or encapsulation of ACM and LBP, Asbestos Air Monitoring, clearance sample analysis, contractor oversight, and cleanup reporting.
ii.	Anticipated Project Schedule: Initiated 10-12 months of award & expected to last 3-5 months
iii.	Task/Activity Lead(s): Qualified Environmental Consultant and Cleanup Contractors
iv.	Outputs: 3 sites ready for reuse, 4 remediation jobs created (annualized), 3 cleanup reports
<b>Task 4: Programmatic Support</b>	
i.	Project Implementation: Town staff, with QEC assistance, will oversee grant implementation and administration in support of activities to ensure compliance with the EPA Cooperative Agreement Work Plan, schedule, and terms and conditions for the term of the grant. The QEC will work with Town staff to procure cleanup contractors, complete ACRES Database reporting, Yearly Financial Reporting, Quarterly Reporting, MBE/WBE forms, and additional programmatic support for the estimated 1.5-year project term. Town staff travel budget allows for two staff to attend one brownfield training conference/workshop.
ii.	Anticipated Project Schedule: Initiated upon award and continues throughout project
iii.	Task/Activity Lead(s): Town of Central Staff
iv.	Outputs: ACRES Database Reporting, Yearly & Quarterly Reporting, MBE/WBE Forms, Programmatic Support, Contractor Procurement, and Two staff to attend a conference.

**c. Cost Estimates:** *Below are the anticipated cost estimates for this project based on past brownfield projects as determined by local market standards. The budget for this project includes travel, supplies and contractual costs only. Funding for this project will be for **hazardous substance**.* **Task 1-Outreach:** Contractual: CIP \$1,080 (8hrs x \$135), 3 Community Meetings \$3,240 (24hrs x \$135) (\$1,080/meeting), Supplies: Supplies (printing of materials, etc.) \$1,000. **Task 2-Planning:** Contractual: Finalize 3 ABCAs \$4,860 (36hrs x \$135) & 3 Abatement Designs



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\$4,860 (36hrs x \$135), 3 SS-QAPPs & HASPs \$16,200 (40hrs x \$135), 2 O&M Plans \$4,320 (32hrs x \$135) **Task 3-Cleanup:** *Contractual: Abatement costs are based on estimates provided by contractors. Central will utilize their cost share for abatement costs.* **Site 1:** ACM & LBP Abatement \$20,000, Asbestos Air Monitoring (AAM) \$5,000 (50hrs x \$100), Oversight \$1,350 (10hrs x \$135), Clearance Sample Analysis \$500, Cleanup Reporting \$2,025 (15hrs x \$135); **Site 2:** ACM Abatement \$42,500, AAM \$10,000 (100hrs x \$100), Oversight \$1,350 (10hrs x \$135), Clearance Sample Analysis \$500, Cleanup Reporting \$2,025 (15hrs x \$135); **Site 3:** ACM & LBP Abatement \$21,500, AAM \$7,000 (70hrs x \$100), Oversight \$1,350 (10hrs x \$135), Clearance Sample Analysis \$500, Cleanup Reporting \$2,025 (15hrs x \$135) **Task 4-Programmatic Support:** *Contractual:* ACRES, Quarterly & Annual Reporting, MBE/WBE Forms, Programmatic Support for the ~1.5-year grant period \$15,120 (112hrs x \$135), Development of bid documents, pre-bid meeting, evaluation of bids, and contractor selection \$8,100 (60hrs x \$135). Travel: 2 staff to attend a 3-day conference including airfare (\$750/person) and hotel, meal, and incidental (\$650/person) \$2,800.

Category	Tasks – Hazardous Substance				Totals
	<i>Outreach</i>	<i>Planning</i>	<i>Cleanup</i>	<i>Programmatic Support</i>	
<b>Travel</b>				\$2,800	\$2,800
<b>Supplies</b>	\$1,000				\$1,000
<b>Contractual</b>	\$4,320	\$30,240	\$117,625	\$23,220	\$175,405
<b>Total Federal Funding</b>	<b>\$5,320</b>	<b>\$30,240</b>	<b>\$87,757.50</b>	<b>\$26,020</b>	<b>\$149,337.50</b>
<b>Cost Share (20%)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$29,867.50</b>	<b>\$0</b>	<b>\$29,867.50</b>
<b>Total Budget</b>	<b>\$5,320</b>	<b>\$30,240</b>	<b>\$117,625</b>	<b>\$26,020</b>	<b>\$179,205</b>

**d. Measuring Environmental Results:** To ensure this EPA Brownfield Grant is on schedule, the Central Brownfields Team, which will include the QEC, will meet quarterly to track all **outputs identified in 3.b** and will report progress to the EPA via quarterly reports, and project expenditures and activities will be compared to the project schedule to ensure the project will be completed within the anticipated time frame. Site information will be entered and tracked in the ACRES database. Outputs to be tracked include QAPP, ABCA, and cleanup plan development, contractor procurement, quarterly, annual, and closeout reports, and the number of community meetings. The outcomes to be tracked include community participation, acres ready for reuse, redevelopment dollars leveraged, and jobs created. In the event the project is not progressing efficiently, countermeasures are in place to address the problem which include making monthly calls to their EPA Project Officer and, if needed, revising the existing Work Plan to get back on schedule.

#### **4. PROGRAMMATIC CAPABILITY AND PAST PERFORMANCE**

**a. Programmatic Capability** i. Organizational Structure & ii. Description of Key Staff: With a knowledgeable, experienced staff and a variety of resources at their disposal, Central is ready and able to successfully manage and implement all phases of work required to remediate and redevelop the target sites. **Phillip Mishoe**, manager of Central's current assessment grant, will continue as Brownfields Director. He has a BS in Accounting from Clemson University and a Masters in Public Administration from Valdosta State University. He has 14 years of experience as an administrator and 10 additional years experience serving in various government roles including contracts administration and department head. Phillip also serves on the Board of Directors for the Clemson Area Chamber of Commerce. His educational background coupled with his work experience have given him the know-how and hands-on experience required to successfully





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manage both state and federal grant programs including program implementation and finance. Phillip will be responsible for day to day activities, timely expenditure of funds, and administrative and financial management of the project. He will be assisted by **Curt Edsall** who will serve as Brownfields Project Manager. He is Central's Director of Planning and Codes and is also tasked with economic and community development. He is a SC licensed & ICC Certified Building Official and a SC licensed residential builder. Curt spent part of his career in commercial construction before transitioning to residential construction, where he completed some of the area's most prestigious, award-winning homes. A qualified environmental consultant (QEC) will assist with the technical and reporting portions of the project.

iii. Acquiring Additional Resources: Using local contracting requirements and procurement process, Central will procure a QEC to assist with technical and reporting portions of the project, as well as other contractors needed to complete the project. Central will ensure compliance with the EPA's "Professional Service" procurement process.

**b. Past Performance and Accomplishments** i. Currently Has or Previously Received an EPA Brownfields Grant (1) Accomplishments: Central was awarded a \$400,000 EPA Community-wide Assessment Grant in 2016 to assess properties located along the Railroad Corridor. The goal was to assess and prepare four high priority sites (**Concrete & Plaster Plant**, **Central Garage**, **Central Laundromat**, and the **American House Spinning Property**) in the community for redevelopment. The **Concrete & Plaster Plant** was assessed and asbestos abatement and demolition of the structures was completed, leading to the site's redevelopment with parking and train observation platforms for town events. The **Central Garage** site was assessed and enrolled in the SCDHEC VCP. Central acquired the site and is pursuing this cleanup funding to address identified ACM and LBP. Within a month of site assessment activities, Central officials were approached by multiple developers interested in redeveloping this site. The **Central Laundromat** site was assessed and enrolled in the VCP. Central is pursuing cleanup funding to address identified ACM to pave the way for site redevelopment. A Phase I ESA and ACM and LBP Survey have been completed on the 88-acre former textile mill **American House Spinning** (AHS) site. A developer has applied for AHS's entry into the VCP and plans to use Central's remaining assessment grant funds to complete a Phase II ESA. To date, assessment activities have resulted in the completion of Phase I ESAs of all 8 sites, 8 Phase II ESAs (or equivalent), 3 ABCAs, 5 abatement designs, and 3 sites enrolled/applied in the VCP. In a town with an area of only 2.4 sq miles (1,536-acres), **95-acres have been assessed** and 3.5-acres have been returned to productive reuse. Anticipated cleanup activities will result in an additional **89.3-acres made ready for reuse**. (2) Compliance with Grant Requirements: Central has completed or has nearly completed the project goals/milestones of their current assessment grant, including the workplan and compliance with all terms/conditions. Quarterly reports and ACRES data entry are being completed in a timely manner. The grant period began October 1, 2016 with a September 30, 2019 end date; however, due to site eligibility issues with several sites and site access difficulties due to an overseas site owner and subsequent VCP negotiation (AHS), an extension through March 31, 2020 was granted. The circumstances were communicated to the Project Officer well ahead of the initial end of grant period and, while other sites were available, their redevelopment potential was low, and it was determined that an extension would be in the best interest of Central in order to best fulfill their goals. As of submission of this application, approximately \$60,000 in grant funds remains to be spent, all planned to be expended by the end of the grant period primarily for Phase II ESAs for two sites (over 88.5-acres) that are planned for Phase II assessment by early 2020.



# Threshold Criteria



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**Threshold Criteria**

**1. Applicant Eligibility**

The Town of Central (Town), South Carolina is eligible to apply for the EPA Brownfields Community-wide Assessment Grant as a local government as defined under 2 CFR § 200.64.

**2. Previously Awarded Cleanup Grants**

The Town of Central affirms that the proposed sites have not received funding from a previously awarded EPA Brownfields Cleanup Grant.

**3. Site Ownership**

The Town acquired title to the three sites as follows:

Site 1: Central Garage (704 West Main Street) – acquired title on August 22, 2018

Site 2: Central Laundromat (703 West Main Street) – acquired title on August 22, 2018

Site 3: Public Health Building (225 Broad Street) – acquired (by abandonment) on August 25, 2017

**4. Basic Site Information**

**Site 1**

- a) Name: Central Garage
- b) Address: 704 West Main Street Central, SC 29630
- c) Current owner: Town of Central

**Site 2**

- a) Name: Central Laundromat
- b) Address: 703 West Main Street Central, SC 29630
- c) Current owner: Town of Central

**Site 3**

- a) Name: Public Health Building
- b) Address: 225 Broad Street Central, SC 29630
- c) Current owner: Town of Central

**5. Status and History of Contamination at the Site**

**Site 1 – Central Garage**

- a) Hazardous Substances.
- b) This site, located on a 0.5-acre parcel along Main Street in downtown Central, was used for a gas and service station from approximately 1949 until late 1998. The site has been largely vacant since 1998, though a tow truck was occasionally parked on site.
- c) A 2018 Phase I Environmental Site Assessment (ESA) of the property identified the following Recognized Environmental Conditions (RECs): four abandoned in place underground storage tanks (USTs), three in-ground hydraulic lifts, two waste oil above-ground storage tanks, and a drainage system. An asbestos survey and lead-based paint survey identified asbestos in various building materials including floor tile and mastic, vinyl flooring, window glazing, plaster, and flashing, and lead-based paint on various surfaces including doors, window and door frames, and block walls. Prior to its acquisition of the property, the Town enrolled the



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site into the South Carolina Department of Health and Environmental Control (SCDHEC) Voluntary Cleanup Program (VCP) and subsequently completed a Phase II ESA in accordance with an approved Site-Specific Quality Assurance Project Plan (SS-QAPP). The Phase II ESA, which included the removal of the four USTs and the three hydraulic lifts from the site, identified the following impacts to environmental media: semi-volatile organic compounds (SVOCs) and the polychlorinated biphenyl (PCB) Aroclor 1260 at concentrations above their respective US EPA Regional Screening Levels (RSLs) in deeper soils (>4ft) (not subject to TSCA involuntary action); the volatile organic compound (VOC) tetrachloroethene above its US EPA Maximum Contaminant Level in groundwater on site; and the VOCs tetrachloroethene and trichloroethene at concentrations above their applicable target sub-slab residential and/or commercial soil gas concentrations. Based on the planned reuse of the site and SCDHEC's VCP requirements, impacts to soil, groundwater, and soil gas will be managed through deed restrictions and a media management plan; however, **the asbestos containing building materials and lead-based paint remain an impediment to redevelopment of the property.**

- d) Current on-site facilities were constructed as early as the 1940s. During this period of time it was common practice to utilize building materials and paints containing asbestos and lead. The 2017 Hazardous Material Survey identified asbestos and lead-containing paints throughout the structure. The identified asbestos and lead paint contamination appears to be limited to structural materials with no currently identifiable impacts to soil and groundwater.

### Site 2 – Central Laundromat

- a) Hazardous Substances.
- b) The onsite structure formerly housed coin operated washers and dryers. A used car lot historically operated on the southern portion of the site. No operations are currently conducted at the site.
- c) A 2018 Phase I ESA identified the following RECs: potential groundwater impacts from the upgradient Central Garage, a debris pile containing building debris and machine parts, and the numerous automobiles in various states of disrepair once located on site. An asbestos survey and lead-based paint survey identified asbestos in various building materials including interior and exterior spray on wall and ceiling texture, window caulking, and edge flashing, and lead-based paint on various surfaces including a metal canopy, block walls, and metal roof capping. Prior to its acquisition of the property, the Town enrolled the site into the SCDHEC VCP and subsequently completed a Phase II ESA in accordance with an approved SS-QAPP. The Phase II ESA identified no impacts to soil, groundwater, or soil gas that warrant corrective action; however, **the asbestos containing building materials and lead-based paint remain an impediment to redevelopment of the property;** and
- d) Current on-site facilities were constructed as early as the 1960s. During this period of time it was common practice to utilize building materials and paints containing asbestos and lead. The 2017 Hazardous Material Survey identified asbestos and lead-containing paints throughout the structure. The identified asbestos and lead paint contamination appears to be limited to structural materials with no currently identifiable impacts to soil and groundwater.



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#### Site 3 – Public Health Building

- a) Hazardous Substances.
- b) This site is a former county public health center that operated from the early 1950s to the 1990s. Since that time, the building has largely remained vacant though occasionally utilized for community meeting space.
- c) A June 2019 Phase I ESA and subsequent GPR survey identified the presence of an unregulated heating oil UST. An asbestos survey and lead-based paint survey identified asbestos in various building materials including floor tile and mastic, insulation, door gaskets, and window glazing and caulking, and lead-based paint on various surfaces including plaster, wall tile, doors and door frames, and structural steel. Additional assessment, which includes the removal of the heating oil UST is planned for early 2020. If a release is identified during removal, the Town intends to complete corrective measures utilizing the SCDHEC State Underground Petroleum Environmental Response Bank (SUPERB) and city funding, if needed. However, **the asbestos containing building materials and lead-based paint remain an impediment to redevelopment of the property.**
- d) Current on-site facilities were constructed as early as the 1950s. During this period of time it was common practice to utilize building materials and paints containing asbestos and lead. The 2019 Asbestos and Lead-Based Paint Survey identified asbestos and lead-containing paints throughout the structure. The identified asbestos and lead paint contamination appears to be limited to structural materials with no currently identifiable impacts to soil and groundwater.

#### 6. Brownfields Site Definition

The Town affirms for **all three sites** that:

- a) The sites are **NOT** listed or proposed for listing on the National Priorities List;
- b) The sites are **NOT** subject to unilateral administrative orders, court orders, administrative orders on consent, or judicial consent decrees issued to or entered into by parties under CERCLA; and
- c) The sites are **NOT** subject to the jurisdiction, custody, or control of the U.S. government.

#### 7. Environmental Assessment Required for Cleanup Grant Proposals

The following assessment reports have been completed for the sites:

##### Site 1 – Central Garage

- Phase I ESA – Central Garage Site: Terracon Consultants, Inc. February 21, 2017
- Hazardous Material Survey – Central Garage Site: Terracon Consultants, Inc. February 28, 2017 (Asbestos and Lead-Containing Paint included)
- Phase I ESA – Central Garage Site: Terracon Consultants, Inc. June 26, 2018
- Phase II ESA – Central Garage Site: Terracon Consultants, Inc. October 10, 2019

##### Site 2 – Central Laundromat

- Phase I ESA – Central Laundromat Site: Terracon Consultants, Inc. February 17, 2017
- Hazardous Material Survey – Central Laundromat Site: Terracon Consultants, Inc. February 27, 2017 (Asbestos and Lead-Containing Paint included)
- Phase I ESA – Central Laundromat Site: Terracon Consultants, Inc. June 26, 2018
- Phase II ESA – Central Laundromat Site: Terracon Consultants, Inc. October 17, 2019



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**Site 3 – Public Health Building**

- Phase I ESA – Central Public Health Building Site: Terracon Consultants, Inc. June 14, 2019
- Asbestos and Lead-Based Paint Survey – Central Public Health Building Site: Terracon Consultants, Inc. June 14, 2019

**8. Enforcement or Other Actions**

**All Three Sites**

The Town is not aware of any ongoing or anticipated environmental enforcement or other actions related to the site for which Brownfields Cleanup Grant funding is sought. The Town is not aware of any inquiries, or orders from federal, state, or local government entities that the applicant is aware of regarding the responsibility of any party (including the applicant) for the contamination, or hazardous substances at the site, including any liens.

**9. Sites Requiring a Property-Specific Determination**

**Site 1 – Central Garage**

This site does not require a property-specific determination. PCBs were identified in site soils beneath building slabs that will remain in place to serve as a cap. This finding has been reported to SCDHEC and EPA Region 4. In order to fulfill SCDHEC VCP requirements, a deed restriction will be placed on the site to ensure this cap is property maintained. Per Section 1.5.5 in the Information on Sites Eligible for Brownfields Funding under CERCLA § 104(k), EPA has not initiated an involuntary action with any person to address the PCB contamination; therefore, a property-specific determination is not required for this site.

**Site 2 – Central Laundromat**

This site does not require a property-specific determination.

**Site 3 – Public Health Building**

This site does not require a property-specific determination.

**10. Threshold Criteria Related to CERCLA/Petroleum Liability**

**Site 1 – Central Garage**

**1. Property Ownership Eligibility – Hazardous Substance Sites**

**i. EXEMPTIONS TO CERCLA LIABILITY**

**(1) Indian Tribes**

Not Applicable

**(2) Alaska Native Village Corporations and Alaska Native Regional Corporations**

Not Applicable

**(3) Property Acquired Under Certain Circumstances by Units of State and Local Government**

Not Applicable

**ii. EXCEPTIONS TO MEETING THE REQUIREMENTS FOR ASSERTING AN AFFIRMATIVE DEFENSE TO CERCLA LIABILITY**

**(1) Publicly Owned Brownfield Sites Acquired Prior to January 11, 2002**

Not Applicable





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**iii. LANDOWNER PROTECTIONS FROM CERCLA LIABILITY**

**(1) Bona Fide Prospective Purchaser Liability Protection**

**(a) Information on the Property Acquisition:**

- (i) The Town acquired the site by negotiated purchase from a private individual;
- (ii) the Town acquired the property on August 22, 2018;
- (iii) the Town is the sole owner of the site and has a fee simple title;
- (iv) the Town purchased the property from Lemuel Oswell Evatt, Jr.; and
- (v) the Town does not have familial, contractual, corporate, or financial relationships or affiliations with any person or entity potentially liable for contamination at the site.

**(b) Pre-Purchase Inquiry**

(i) The Town acquired the site in 2018 from Lemuel Oswell Evatt, Jr. The site was used as a gas and service station from approximately 1949 until late 1998. The site has been largely vacant since 1998, though a tow truck was occasionally parked on site up until 2015. The site is currently vacant. Prior to the Town acquiring the site the following site assessment activities were completed on behalf of the Town of Central:

- Phase I ESA – Central Garage Site: Terracon Consultants, Inc. 2017
- Hazardous Material Survey – Central Garage Site: Terracon Consultants, Inc. 2017
- Phase I ESA – Central Garage Site: Terracon Consultants, Inc. 2018

(ii) The Terracon Consultants, Inc. (Terracon) ASTM/AAI Compliant Phase I ESA dated June 26, 2018 was completed for the Town of Central as part of the Town's pre-acquisition due diligence. Mr. Thomas Tripp of Terracon completed the Phase I ESA. Mr. Tripp declared that, to the best of his professional knowledge and belief, that, at the time of the report, he met the definition of Environmental Professional as defined in 312.10 of 40CFR 312. The Town acquired the property on August 22, 2018.

(iii) The original Phase I ESA was conducted more than 180 days prior to acquisition of the property; therefore, a new Phase I ESA was conducted on June 26, 2018.

**(c) Timing and/or Contribution Toward Hazardous Substances Disposal**

All disposal of hazardous substances at the site occurred before the Town acquired the site. The Town did not cause or contribute to any release of hazardous substances at the site. The Town has not, at any time, arranged for the disposal of hazardous substances at the site or transported hazardous substances to the site.

**(d) Post-Acquisition Uses**

The site is currently vacant and not in use. There are no applicable current or prior users during the time of ownership by the Town.

**(e) Continuing Obligations**

**Reasonable Steps Taken with Respect to Hazardous Substances Found at the Site:**

(i) The Town will exercise specific appropriate care with hazardous substances found at the site by taking reasonable steps to stop any continuing releases. The summary of the prior Site Assessments, as described in the "Pre-Purchase Inquiry" section above, indicated that there are, with three exceptions, no known continuing releases. Two exceptions are the release of



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asbestos or lead from on-site structural materials which could be released to the environment by weather, building degradation, fire, vandalism, or various other means. The Town has taken steps to prevent the spread of these materials by securing and limiting access to the site and complying with state requirements. The planned cleanup activities will further stop continuing releases of asbestos and lead. The Town intends to utilize Cleanup grant funds to abate asbestos containing materials from the subject property, thus fulfilling their continuing obligations in regard to current releases of known hazardous substances found at the site. However, demolition restrictions would remain following demonstration of clearance criteria due to the remaining asbestos containing plaster on the front of the structure; therefore, follow-up inspections and maintenance will be required (i.e. an Operations & Maintenance Plan). Based on the plans set forth in the ABCA for the site the LBP would be removed and containerized for off-site landfill disposal as a special or regulated waste, thus fulfilling their continuing obligations in regard to current releases of known hazardous substances found at the site. The SCDHEC regulations require that painted demolition debris with a lead concentration greater than 0.06% by weight or 0.7 milligrams per square centimeter (mg/cm<sup>2</sup>) be disposed in a permitted Class II or Class III landfill. Landfill disposal authorizations would be secured prior to initiating the work. Several structural components that contain lead will remain within the structure including interior load bearing plaster walls, interior window frames, exterior doors/frame, exterior window sills, exterior plaster walls and exterior concrete block walls. These components are to have any peeling paint stabilized and encapsulated. This would be achieved by scraping loose and peeling paint then applying a coat of an encapsulant. There is an obligation to maintain in place the remaining LBP. The third exception is the disturbance of subsurface contamination which could be released to the environment by grading, excavation, or various other means. Based on the planned reuse of the site and SCDHEC's VCP requirements, impacts to soil, groundwater, and soil gas will be managed by the Town through deed restrictions and a media management plan, thus fulfilling their continuing obligations in regard to current releases of known hazardous substances found at the site.

(ii) The Town will exercise specific appropriate care with hazardous substances found at the site by taking reasonable steps to prevent any threatened future releases. The Town has taken steps to prevent any threatened future releases by securing and limiting access to the site, monitoring the condition of identified asbestos containing building materials and lead-containing paints, and complying with state requirements. The planned cleanup activities will further prevent threatened future releases. The Town intends to utilize Cleanup grant funds to abate asbestos containing materials from the subject property, thus fulfilling their continuing obligations in regard to future releases of known hazardous substances found at the site. However, demolition restrictions would remain following demonstration of clearance criteria due to the remaining asbestos containing plaster on the front of the structure; therefore, follow-up inspections and maintenance will be required (i.e. an Operations & Maintenance Plan). Based on the plans set forth in the ABCA for the site the LBP would be removed and containerized for off-site landfill disposal as a special or regulated waste, thus fulfilling their continuing obligations in regard to future releases of known hazardous substances found at the site. The SCDHEC regulations require that painted demolition debris with a lead concentration greater than 0.06% by weight or 0.7 milligrams per square centimeter (mg/cm<sup>2</sup>) be disposed in a permitted Class II or Class III landfill.



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Landfill disposal authorizations would be secured prior to initiating the work. Several structural components that contain lead will remain within the structure including interior load bearing plaster walls, interior window frames, exterior doors/frame, exterior window sills, exterior plaster walls and exterior concrete block walls. These components are to have any peeling paint stabilized and encapsulated. This would be achieved by scraping loose and peeling paint then applying a coat of an encapsulant. There is an obligation to maintain in place the remaining LBP. Based on the planned reuse of the site and SCDHEC's VCP requirements, impacts to soil, groundwater, and soil gas will be managed by the Town and future owners through deed restrictions and a media management plan thus fulfilling their continuing obligations in regard to future releases of known hazardous substances found at the site.

(iii) The Town will exercise specific appropriate care with hazardous substances found at the site by taking reasonable steps to prevent or limit exposure to any previously released hazardous substance. The Town has taken steps to prevent or limit exposure to any previously released hazardous substances by securing and limiting access to the site, monitoring the condition of identified asbestos containing building materials and lead-containing paints, and complying with state requirements. The planned cleanup activities will further prevent and/or limit exposure to previously released asbestos and lead. The Town intends to utilize Cleanup grant funds to abate asbestos containing materials from the subject property, thus fulfilling their continuing obligations in regard to past releases of known hazardous substances found at the site. However, demolition restrictions would remain following demonstration of clearance criteria due to the remaining asbestos containing plaster on the front of the structure; therefore, follow-up inspections and maintenance will be required (i.e. an Operations & Maintenance Plan). Based on the plans set forth in the ABCA for the site the LBP would be removed and containerized for off-site landfill disposal as a special or regulated waste, thus fulfilling their continuing obligations in regard to past releases of known hazardous substances found at the site. The SCDHEC regulations require that painted demolition debris with a lead concentration greater than 0.06% by weight or 0.7 milligrams per square centimeter (mg/cm<sup>2</sup>) be disposed in a permitted Class II or Class III landfill. Landfill disposal authorizations would be secured prior to initiating the work. Several structural components that contain lead will remain within the structure including interior load bearing plaster walls, interior window frames, exterior doors/frame, exterior window sills, exterior plaster walls and exterior concrete block walls. These components are to have any peeling paint stabilized and encapsulated. This would be achieved by scraping loose and peeling paint then applying a coat of an encapsulant. There is an obligation to maintain in place the remaining LBP. Based on the planned reuse of the site and SCDHEC's VCP requirements, impacts to soil, groundwater, and soil gas will be managed by the Town and future site owners through deed restrictions and a media management plan thus fulfilling their continuing obligations in regard to past releases of known hazardous substances found at the site.

The Town confirms its commitment to: (i) comply with all land use restrictions, (ii) assist and cooperate with those performing the cleanup and provide access to the property, (iii) comply with all information requests and administrative subpoenas that have or may be issued in connection with the property, and (iv) provide legally required notices.



**Site 2 – Central Laundromat**

**1. Property Ownership Eligibility – Hazardous Substance Sites**

**i. EXEMPTIONS TO CERCLA LIABILITY**

**(1) Indian Tribes**

Not Applicable

**(2) Alaska Native Village Corporations and Alaska Native Regional Corporations**

Not Applicable

**(3) Property Acquired Under Certain Circumstances by Units of State and Local Government**

Not Applicable

**ii. EXCEPTIONS TO MEETING THE REQUIREMENTS FOR ASSERTING AN AFFIRMATIVE DEFENSE TO CERCLA LIABILITY**

**(1) Publicly Owned Brownfield Sites Acquired Prior to January 11, 2002**

Not Applicable

**iii. LANDOWNER PROTECTIONS FROM CERCLA LIABILITY**

**(1) Bona Fide Prospective Purchaser Liability Protection**

**(a) Information on the Property Acquisition:**

- (i) The Town acquired the site by negotiated purchase from a private individual;
- (ii) the Town acquired the property on August 22, 2018;
- (iii) the Town is the sole owner of the site and has a fee simple title;
- (iv) the Town purchased the property from Lemuel Oswell Evatt, Jr.; and
- (v) the Town does not have familial, contractual, corporate, or financial relationships or affiliations with any person or entity potentially liable for contamination at the site.

**(b) Pre-Purchase Inquiry**

(i) The Town acquired the site in 2018 from Lemuel Oswell Evatt, Jr. This 0.5-acre former laundromat and used car lot site once housed coin operated washers and dryers from approximately 1965 though the date of last use as a laundromat could not be determined with certainty. A used car lot once operated on the southern portion of the site from approximately 1950 into at least the early 2000s. No operations are currently conducted at the site. Prior to the Town acquiring the site the following site assessment activities were completed on behalf of the Town of Central:

- Phase I ESA – Central Laundromat Site: Terracon Consultants, Inc. 2017
- Hazardous Material Survey – Central Laundromat Site: Terracon Consultants, Inc. 2017
- Phase I ESA – Central Laundromat Site: Terracon Consultants, Inc. 2018

(ii) The Terracon Consultants, Inc. (Terracon) ASTM/AAI Compliant Phase I ESA dated June 26, 2018 was completed for the Town of Central as part of the Town's pre-acquisition due diligence. Mr. Thomas Tripp of Terracon completed the Phase I ESA. Mr. Tripp declared that, to the best of his professional knowledge and belief, that, at the time of the report, he met the definition of Environmental Professional as defined in 312.10 of 40CFR 312. The Town acquired the property on August 22, 2018.



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(iii) The original Phase I ESA was conducted more than 180 days prior to acquisition of the property; therefore, a new Phase I ESA was conducted on June 26, 2018.

(c) Timing and/or Contribution Toward Hazardous Substances Disposal

All disposal of hazardous substances at the site occurred before the Town acquired the site. The Town did not cause or contribute to any release of hazardous substances at the site. The Town has not, at any time, arranged for the disposal of hazardous substances at the site or transported hazardous substances to the site.

(d) Post-Acquisition Uses

The site is currently vacant and not in use. There are no applicable current or prior users during the time of ownership by the Town.

(e) Continuing Obligations

Reasonable Steps Taken with Respect to Hazardous Substances Found at the Site:

(i) The Town will exercise specific appropriate care with hazardous substances found at the site by taking reasonable steps to stop any continuing releases. The summary of the prior Site Assessments, as described in the "Pre-Purchase Inquiry" section above, indicated that there are, with two exceptions, no known continuing releases. The exceptions are the release of asbestos or lead from on-site structural materials which could be released to the environment by weather, building degradation, fire, vandalism, or various other means. The Town has taken steps to prevent the spread of these materials by securing and limiting access to the site and complying with state requirements. The planned cleanup activities will further stop continuing releases of asbestos and lead. The Town intends to utilize Cleanup grant funds to abate asbestos containing materials from the subject property, thus fulfilling their continuing obligations in regard to current releases of known hazardous substances found at the site. The SCDHEC regulations require that painted demolition debris with a lead concentration greater than 0.06% by weight or 0.7 milligrams per square centimeter (mg/cm<sup>2</sup>) be disposed in a permitted Class II or Class III landfill. Since the redevelopment plan for the site includes complete demolition of the onsite structure it is not a requirement to abate or encapsulate the LBP-coated materials provided that the paint is left intact on the substrate.

(ii) The Town will exercise specific appropriate care with hazardous substances found at the site by taking reasonable steps to prevent any threatened future releases. The Town has taken steps to prevent any threatened future releases by securing and limiting access to the site, monitoring the condition of identified asbestos containing building materials and lead-containing paints, and complying with state requirements. The planned cleanup activities will further prevent threatened future releases. The Town intends to utilize Cleanup grant funds to abate asbestos containing materials from the subject property, thus fulfilling their continuing obligations in regard to future releases of known hazardous substances found at the site. The SCDHEC regulations require that painted demolition debris with a lead concentration greater than 0.06% by weight or 0.7 milligrams per square centimeter (mg/cm<sup>2</sup>) be disposed in a permitted Class II or Class III landfill. Since the redevelopment plan for the site includes complete demolition of the onsite structure it is not a requirement to abate or encapsulate the LBP-coated materials provided that the paint is left intact on the substrate.





## Town of Central, SC

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(iii) The Town will exercise specific appropriate care with hazardous substances found at the site by taking reasonable steps to prevent or limit exposure to any previously released hazardous substance. The Town has taken steps to prevent or limit exposure to any previously released hazardous substances by securing and limiting access to the site, monitoring the condition of identified asbestos containing building materials and lead-containing paints, and complying with state requirements. The planned cleanup activities will further prevent and/or limit exposure to previously released asbestos and lead. The Town intends to utilize Cleanup grant funds to abate asbestos containing materials from the subject property, thus fulfilling their continuing obligations in regard to past releases of known hazardous substances found at the site. The SCDHEC regulations require that painted demolition debris with a lead concentration greater than 0.06% by weight or 0.7 milligrams per square centimeter (mg/cm<sup>2</sup>) be disposed in a permitted Class II or Class III landfill. Since the redevelopment plan for the site includes complete demolition of the onsite structure it is not a requirement to abate or encapsulate the LBP-coated materials provided that the paint is left intact on the substrate.

The Town confirms its commitment to: (i) comply with all land use restrictions, (ii) assist and cooperate with those performing the cleanup and provide access to the property, (iii) comply with all information requests and administrative subpoenas that have or may be issued in connection with the property, and (iv) provide legally required notices.

#### Site 3 – Public Health Building

##### 1. Property Ownership Eligibility – Hazardous Substance Sites

###### i. EXEMPTIONS TO CERCLA LIABILITY

###### (1) Indian Tribes

Not Applicable

###### (2) Alaska Native Village Corporations and Alaska Native Regional Corporations

Not Applicable

###### (3) Property Acquired Under Certain Circumstances by Units of State and Local Government

(a) A local non-profit community organization donated the property to Pickens County for development of a public health facility which was constructed in the 1950s. The terms of the donation (as recorded on the deed) indicated that the property must be used for a health center or hospital purpose or ownership will revert to the non-profit organization. Since the non-profit community organization is no longer solvent, it was determined that the Town of Central was the most closely related entity to the non-profit organization; therefore, in order to satisfy the deed requirements, the property was transferred to the Town of Central in 2017.

(b) The Town acquired the property on August 25, 2017.

(c) Disposal of hazardous substances at the site occurred before the Town acquired the property.

(d) The Town affirms that it has not caused or contributed to any release of hazardous substances at the site.

(e) The Town affirms that it has not, at any time, arranged for the disposal of hazardous substances at the site or transported hazardous substances to the site.





**ii. EXCEPTIONS TO MEETING THE REQUIREMENTS FOR ASSERTING AN AFFIRMATIVE DEFENSE TO CERCLA LIABILITY**

**(1) Publicly Owned Brownfield Sites Acquired Prior to January 11, 2002**

Not Applicable

**iii. LANDOWNER PROTECTIONS FROM CERCLA LIABILITY**

**(1) Bona Fide Prospective Purchaser Liability Protection**

Not Applicable

**11. Cleanup Authority and Oversight Structure**

**All Three Sites**

a. Sites 1 & 2 (Central Garage and Central Laundromat) are currently enrolled in the SCDHEC Voluntary Cleanup Program (VCP) with no plans to enroll Site 3 (Public Health Building) in the VCP due to the nature of contamination being addressed as the SCDHEC VCP does not typically address asbestos and lead paint concerns in building materials. The SCDHEC Bureau of Air – Asbestos Section is the cleanup authority for asbestos and the SCDHEC Solid Waste Section is the cleanup authority responsible for lead-paint. These sections typically do not require a technical review of plans, reports, and activities associated with asbestos and lead paint abatement projects; however, the department has agreed to provide review and comment as necessary to ensure the cleanup is protective of human health and the environment. If necessary, US EPA will also be consulted in order to ensure that the cleanup is protective of human health and the environment.

The Town of Central will also hire a qualified environmental consultant prior to implementing remediation activities at the subject property. The Town will comply with competitive procurement provisions of 2 CFR 200.317 through 200.326 for contracting the qualified environmental consultant. The consultant will provide the technical expertise required to conduct, manage, and oversee the cleanup, ensuring the adherence to applicable state and federal regulations and requirements.

b. The subject properties are accessible on all sides from public roads, with the exception of the western and southern property boundaries of Site 1, southern boundary of Site 2 and the western boundary of Site 3. Based on the nature and location of the identified contamination on the subject property, it is not anticipated that neighboring property access will be necessary to conduct cleanup activities, perform confirmation sampling, or monitor offsite migration of contamination; however, if neighboring property access is necessary for proposed cleanup activities, the Town has a good working relationship with neighboring property owners and can secure access to neighboring properties if needed.

**12. Community Notification**

**a. Draft Analysis of Brownfield Cleanup Alternatives**

The Town announced their intent to apply for cleanup funding for the Central Garage, Laundromat, and Public Health Building properties through the Journal, a regional newspaper, on November 9, 2019. A draft ABCA for each site and a draft of this proposal were made available for public review and comment at Town Hall on November 15, 2019.



**Town of Central, SC**  
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**b. Community Notification Ad**

The Town announced their intent to apply for cleanup funding for the Central Garage, Laundromat, and Public Health Building properties through the Journal, a regional newspaper, on November 9, 2019. The announcement indicated that:

- The ABCA for each site and a draft of this proposal were made available for public review and comment at Town Hall;
- Project staff (contact information was provided) could be contacted should someone wish to provide input or comment; and,
- A public meeting to solicit input was held on November 21, 2019 at 3:00 pm in the Town Hall.

Comments were accepted until November 29, 2019 and were incorporated into the documents.

**c. Public Meeting**

A public meeting to discuss the draft proposal and ABCAs was held on Thursday, November 21, 2019 at 3:00 at the Central Town Hall. Comments were accepted until November 29, 2019.

No comments were received, therefore comments and the Town's response to those comments are not included as an attachment; however, a blank comment sheet as made available during the comment is included. The following items from the meeting are included as an attachment:

- meeting notes or summary from the public meeting(s);
- meeting sign-in sheets; and
- meeting comment sheet.

**d. Submission of Community Notification Documents**

No comments were received, therefore comments and the Town's response to those comments are not included as an attachment; however, the following community notification documents are included as an attachment to this proposal:

- a copy of the draft ABCAs;
- a copy of the ad that demonstrates notification to the public and solicitation from comments on the proposal;
- meeting notes or summary from the public meeting(s); and
- meeting sign-in sheets.

**13. Statutory Cost Share**

**a.** The Town has committed \$29,867.50 from its General Fund in order to meet the required 20% cost share.

**b.** The Town will not be requesting a hardship waiver of the cost share.



# Analysis of Brownfield Cleanup Alternatives

# Analysis of Brownfields Cleanup Alternatives

## DRAFT

### SITE 1 - CENTRAL GARAGE 704 WEST MAIN STREET CENTRAL, SOUTH CAROLINA

November 30, 2019

Terracon Project No. 86167225

US EPA Cooperative Agreement No.: 00D47116-0

EPA ACRES Property ID No. 229321



Prepared for:

Town of Central  
Central, South Carolina

Prepared by:

Terracon Consultants, Inc.  
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# Terracon

Environmental



Facilities



Geotechnical



Materials

## Draft Analysis of Brownfield Cleanup Alternatives

### Site 1 - Central Garage

704 W. Main Street

Central, South Carolina

November 30, 2019

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## **1.0 INTRODUCTION AND BACKGROUND**

This Draft Analysis of Brownfield Cleanup Alternatives (ABCA) is in support of evaluating cleanup alternatives and establishing the costs to support the cleanup necessary to support redevelopment of the Former Central Garage (Site) located at 704 W. Main Street in Central, Pickens County, South Carolina. The Town of Central (Town) intends to remove the hazardous building materials from the site in support of their goal to renovate the current site structure and repurpose it for a commercial use. A private developer has expressed interest in the redevelopment of the Central Garage Site into a café that utilizes fresh, local food to support a sustainable food system while providing a community gathering space that celebrates Central's "small town family" history.

This ABCA is intended to briefly summarize information about the site and contamination issues, cleanup standards, applicable laws, cleanup alternatives considered, and the proposed cleanup, and includes information on the effectiveness, the ability of the grantee to implement each alternative, the cost of each proposed cleanup alternative, an evaluation of how commonly accepted climate change conditions might impact proposed cleanup alternatives, and an analysis of the reasonableness of the various cleanup alternatives considered, including the one chosen. The ABCA is intended as a brief preliminary document summarizing the larger and more detailed technical and financial evaluations performed in addressing each of these areas. The ABCA may be modified technically and financially or in more depth relative to each of these areas upon award of funding and in response to community interaction.

Cleanup alternatives were evaluated in accordance with EPA Region 4 protocols and general guidance required prior to implementation of a cleanup design using EPA Brownfields Grant funding. More specifically, this ABCA summarizes viable cleanup alternatives based on site-specific conditions, technical feasibility, resiliency to climate change conditions, and preliminary cost/benefit analyses. Specific cleanup alternatives and associated recommendations are presented in the applicable sections of this report.

### **1.1 Background**

The site is located at 704 West Main Street in Central, Pickens County, South Carolina. Based on a property report from the Pickens County website, the site consists of one parcel identified as Pickens County Parcel No. 4065-10-35-5673 with a total area of approximately 0.5 acres. The on-site facility in recent years has been occupied by a towing service but is currently vacant. The site was a gas station and automotive repair shop from approximately 1949 until late 1998. The site continued to be used as an auto towing service until 2015. No operations are currently conducted at the site. The parcel is currently owned by the Town of Central.

### **1.2 Site Assessment Findings**

A 2018 Phase I Environmental Site Assessment (ESA) completed prior to the Town's acquisition of the property identified the following Recognized Environmental Conditions (RECs): four underground storage tanks (USTs) that were abandoned in place, three in-ground hydraulic lifts, two waste oil above-ground storage tanks, and a drainage system. Prior to its acquisition of the property, the Town enrolled the site into the South Carolina Department of Health and Environmental Control (SCDHEC) Voluntary Cleanup Program (VCP) and subsequently completed a Phase II ESA in accordance with an SCDHEC and US EPA



approved Site-Specific Quality Assurance Project Plan (SS-QAPP). The Phase II ESA, which included the removal of the four USTs from the site, identified the following impacts to environmental media: semi-volatile organic compounds (SVOCs) and the polychlorinated biphenyl (PCB) Aroclor 1260 at concentrations above their respective US EPA Regional Screening Levels (RSLs) in deeper soils (>4ft); the volatile organic compound (VOC) tetrachloroethene above its US EPA Maximum Contaminant Level (MCL) in groundwater on site; and the VOCs tetrachloroethene and trichloroethene at concentrations above their applicable target sub-slab residential and/or commercial soil gas concentrations. Based on the planned reuse of the site and SCDHEC's Voluntary Cleanup Contract requirements, impacts to soil, groundwater, and soil gas will be managed through deed restrictions and a media management plan.

On February 28, 2017, Terracon completed a Hazardous Material Survey on the site. The hazardous material survey identified asbestos in floor tile and mastic, sheet vinyl flooring, window glazing compound, exterior plaster, edge flashing and exterior precast concrete ceiling. Lead-containing paint was identified in samples of several paint systems present throughout the structure. Samples of gray paint on interior metal window frame, white paint on interior wood door and door/window casing, light brown paint on interior wooden window casing and door frame, gray and white paint on the exterior concrete block wall, dark gray paint on exterior concrete window sill and black paint on wooden exterior door and door frame, tan and light brown paint on interior plaster wall, blue paint on exterior concrete block wall and white paint on exterior concrete window sill contained lead at concentrations in excess of 0.06% (by weight) or 0.7 mg/cm<sup>2</sup> which is the criterion for classification as "lead-based paint" in South Carolina.

The Survey Report recommended that that identified asbestos containing materials (ACM) be removed by a South Carolina licensed asbestos abatement contractor prior to demolition of the structure and that third-party asbestos air monitoring be performed during the abatement of the friable materials. Preparation of an asbestos removal work plan was also recommended. Additionally, Terracon recommended that all paint systems be managed as "lead-containing" and that the proposed waste disposal facility be notified for pre-approval prior to the material being shipped offsite.

The following table provides a summary of the ACM that were identified in the structure.

<b>Description</b>	<b>Analytical Result</b>	<b>Location</b>	<b>Condition</b>	<b>Estimated Quantity</b>
9" Red Floor Tile and Black Mastic	Tile - 10% Chrysotile Mastic - 5% Chrysotile	Office	Damaged	75 s.f.
Double Layer Sheet Vinyl	Vinyl - 15% Chrysotile Mastic - Assumed	Restroom	Damaged	25 s.f.
Window Glazing Compound	3% Chrysotile	6 Pane Exterior Windows	Limited Damage	18 s.f.
Exterior Plaster	Base - NAD Finish - 2% Chrysotile	Front of the Building	Good	950 s.f.
Remnant Flashing	4% Chrysotile	Exterior Walls	Significantly Damaged	320 s.f.
Sprayed on Texture on Concrete Panels	2% Chrysotile	Gas Pump Canopy	Significantly Damaged	Removed in Prior Abatement

Paints were found to be lead-containing and Terracon recommended that all paint systems be managed as "lead-containing" and that the proposed waste disposal facility be notified for pre-approval prior to the material being shipped offsite.

## **2.0 PROJECT GOAL AND RE-USE PLAN**

The Town of Central owns the site and has the intention to of redeveloping as an aid in the revitalization of the down town area of the Town. The plan for the site is to renovate the existing former Public Health Building structure and repurpose the site as a commercial space.

EPA brownfield cleanup funding will be used to abate ACM from the site structure prior to renovations using other funding sources. This allows immediate and definitive resolution of the public health issue, while final renovations can then proceed on a schedule that time and resources allow without worry or expense of maintaining and isolating damaged materials from public exposure. Throughout renovations, all paint systems will be managed and disposed of as “lead-containing.”

## **3.0 APPLICABLE REGULATIONS AND CLEANUP STANDARDS**

The regulated contaminant of concern for remedy is asbestos. Asbestos is the name given to a group of six different fibrous minerals that occur naturally in the environment. Asbestos minerals have separable long fibers that are strong and flexible enough to be spun and woven and are heat resistant. Because of these characteristics, asbestos has been used for a wide range of manufactured goods, mostly in building, friction products, heat-resistant fabrics, packaging, gaskets, and coatings. Asbestos fibers can enter the air or water from the breakdown of natural deposits and manufactured asbestos products. Asbestos fibers do not evaporate into air or dissolve in water. Small diameter fibers and particles may remain suspended in air for a long time and be carried long distances by wind or water before settling down. Larger diameter fibers and particles tend to settle more quickly. Asbestos fibers are not able to move through soil. Asbestos fibers are generally not broken down to other compounds and will remain virtually unchanged over long periods. Exposure to asbestos usually occurs by breathing contaminated air in workplaces that make or use asbestos. Asbestos is also found in the air of buildings containing asbestos that are being torn down or renovated. Asbestos exposure can cause serious lung problems and cancer. More detailed information on asbestos is attached as the Agency for Toxic Substance and Disease Registry’s ToxFAQ™ for Asbestos.

Lead-based paint (LBP) is regulated by the EPA and SCDHEC for removal and disposal purposes. The EPA defines LBP as paint, varnish, stain, or other applied coating that contains lead equal to or greater than 1.0 mg/cm<sup>2</sup>, 5,000 mg/kg, or 0.5% by dry weight as determined by laboratory analysis. The SCDHEC regulations require that painted demolition debris with a lead concentration greater than 0.06% by weight or 0.7 milligrams per square centimeter (mg/cm<sup>2</sup>) be disposed in a permitted Class II or Class III landfill. Paint systems were observed to be in good condition during a June 2019 survey performed by Terracon. Since the redevelopment plan for the Site includes renovations of the onsite structure for commercial use, Terracon recommends that the lead-containing paint that would be disturbed during the renovation of the structure be stabilized and/or removed.

### **3.1 Cleanup Responsibility**

The Town of Central will be the cooperative agreement recipient responsible for hiring contractors. The Town will use a qualified Environmental Professional to assist with contracting documents, cleanup

contractor oversight and final documentation. The cleanup will be conducted by an asbestos abatement contractor licensed in the State of South Carolina. A renovation permit will be obtained from the South Carolina Department of Environmental Control (SCDHEC) and local agencies. Applicable documentation will be submitted as required to the SCDHEC.

### **3.2 Cleanup Standards**

The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to demolition or renovation activity. Under NESHAP, asbestos-containing building materials are classified as either friable, Category I non-friable or Category II non-friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Category I non-friable ACM includes packing materials, gaskets, resilient floor coverings and asphalt roofing products containing more than 1 percent (%) asbestos. Category II non-friable ACM are non-friable materials other than Category I materials that contain more than 1% asbestos.

Friable ACM, Category I and Category II non-friable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and which could be crushed or pulverized during anticipated demolition activities are considered regulated ACM (RACM). RACM must be removed prior to renovation or demolition activities.

In the state of South Carolina, asbestos activities are regulated by the Department of Health and Environmental Control (SCDHEC) under the SCDHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects. The SCDHEC requires that any asbestos-related activity conducted in a public building be performed by personnel licensed by the SCDHEC. The owner or operator must provide the SCDHEC with written notification of planned abatement and removal activities prior to the commencement of those activities. The SCDHEC requires four day notification for non-friable projects and 10 day notification for RACM projects. Asbestos abatement must be performed by SCDHEC-licensed asbestos abatement contractors. A SCDHEC-licensed Project Designer shall prepare a written abatement design for each abatement project involving the removal of greater than 3,000 square, 1,500 linear, or 656 cubic feet of RACM. Third-party air monitoring must be conducted during the abatement of friable (regulated) ACM. The SCDHEC asbestos regulations can be found at <http://www.scdhec.gov>.

Standards have been established by the Occupational Safety and Health Administration (OSHA) to limit exposure of workers in the workplace and establish work standards for asbestos and lead. The occupational exposure limits are as follows:

- Asbestos Excursion Limit (excursion limit of 30 minutes): 1.0 f/cc (fibers per cubic centimeter as detected using phase contrast microscopy).
- Asbestos PEL (8-hour time-weighted average permissible exposure level): 0.1 f/cc.
- Lead PEL (8-hour time-weighted average permissible exposure level): 50 µg/m<sup>3</sup>

These standards may be found at <http://www.osha.gov>.

### **3.3 Laws & Regulations Applicable to the Cleanup**

Asbestos is regulated by the AHERA, the Toxic Substance Control Act (TSCA), the Clean Air Act (CAA), and the SCDHEC R.61-86.1. Further, to protect asbestos abatement workers, abatement work must be performed in accordance with OSHA asbestos regulations as promulgated in Title 29 of the CFR, Section 1926.1101. The following work practices should be followed prior to the initiation of demolition activities on the project site:

- Prepare abatement specifications by an SCDHEC licensed Project Designer;
- Notify the SCDHEC of intention to demolish by the required notification form and receive approval for abatement activities;
- Remove all ACM from facility being demolished before disruptive activity begins;
- Handle and dispose of ACM in an approved manner (USEPA, 2006a: Asbestos/NESHAP Regulated Asbestos-Containing Materials Abatement and SC R.61-86.1);
- Comply with applicable OSHA standards;
- Perform third-party asbestos air monitoring prior to, during, and at the conclusion of the abatement activities by an SCDHEC licensed asbestos Air Sampler; and,
- Prepare an asbestos abatement and air monitoring report at the conclusion of the project.

### **4.0 EVALUATION OF CLEANUP ALTERNATIVES**

Asbestos is considered a hazardous substance relative to cleanup grant funding. EPA proposal guidance requires the ABCA, at a minimum, to consider two different cleanup remedies and a “no action” alternative. Asbestos mitigation in the environmental industry is an established practice. Due to its chemical and physical nature, asbestos can, generally speaking, only be managed. Unlike chemical contamination, it cannot be readily altered or broken down. The industry has historically evolved two basic approaches: removal with off-site management and in-place isolation and on-site management.

In addition to effectiveness, implementability, and cost considerations, consideration was given to the sustainability of cleanup alternatives in regard to current and future climate change concerns. According to the National Oceanic and Atmospheric Administration’s (NOAA) National Climate Assessment, the primary climate change conditions identified for the southeast region include increased temperature, decreased water availability, and rising sea levels. Increased temperature and decreased water availability have been identified as site-specific climate change considerations and the resiliency of each cleanup alternative will be evaluated against these considerations.

#### **Cleanup Alternatives Considered**

To address hazardous substances at the Site, three different alternatives were considered. These alternatives are outlined below. The following subsections present each alternative in greater detail, including estimated costs and potential contingency items:

- Cleanup Alternative A: ACM and LBP Removal Pre-Renovation
- Cleanup Alternative B: ACM and LBP Encapsulation

- Cleanup Alternative C: No Action

#### **4.1 Cleanup Alternative A: Pre-Renovation ACM and LBP Removal**

Alternative A includes conventional removal/abatement of ACMs using standard industry practices. Abatement areas would be contained prior to the removal using polyethylene sheeting, controlled negative pressure conditions and/or other applicable measures to prevent asbestos fiber migration beyond the work zone. Abatement procedures require wet removals to further control potential spreading of damaged or friable asbestos and airborne particulates. During and following the abatement, ACM dust, particulates and other residual materials would be vacuumed and filtered out using a high efficiency particulate air (HEPA) filtration system.

ACM would be removed under an SCDHEC-approved permit and containerized for off-site landfill disposal as a special or regulated waste. Waste will be containerized (commonly double bagged) to contain ACM in manageable quantities. Leak-tight containers may also be used. Landfill disposal authorizations would be secured prior to initiating the work. These authorizations are specific to the disposal facility.

ACM removal must be performed by a South Carolina-licensed abatement contractor. In addition, this work requires a 10-business day notification to the SCDHEC Asbestos Section and appropriate coordination with SCDHEC representatives, as needed, throughout the abatement project. An air monitoring program will be required for removal of friable or highly damaged ACM, termed regulated asbestos-containing materials (RACM). Final clearance would be granted following a visual examination of the work area followed by receipt of acceptable air quality testing results (for RACM).

ACM located on the front façade of the structure (plaster finish) will not be removed; however, it will be encapsulated as part of this project. Encapsulation is defined as the treatment of ACM with a liquid that covers the surface with a protective covering or embeds the fibers with an adhesive matrix to prevent the release of asbestos fibers. Encapsulation of RACM is considered an abatement activity. Abatement procedures require wet removals of damaged ACM or ACM debris to further control potential spreading of damaged or friable asbestos and airborne particulates. Following the removal of any damaged ACM or ACM debris the ACM would be sprayed with a bridging compound (similar to Fiberlock Asbestos Binding Compound).

ACM would be encapsulated under an SCDHEC-approved permit and any waste generated would be containerized for off-site landfill disposal as a special or regulated waste. Landfill disposal authorizations would be secured prior to initiating the work. These authorizations are specific to the disposal facility.

ACM encapsulation for RACM must be performed by a South Carolina-licensed abatement contractor. In addition, this work requires a 10-business day notification to the SCDHEC Asbestos Section and appropriate coordination with SCDHEC representatives, as needed, throughout the abatement project. Based on the outdoor nature of the encapsulation of the exterior plaster only area air monitoring will be required for encapsulation. Final clearance would be granted following a visual examination of the work area.

Alternative A also includes conventional removal/abatement of LBP via removal of the interior non-load



bearing walls and ceiling and the component removal of interior doors and door frames using standard industry practices; however, LBP will remain on exterior load bearing walls. Abatement areas would be contained prior to the removal using polyethylene sheeting, controlled negative pressure conditions and/or other applicable measures to prevent lead dust migration beyond the work zone. Abatement procedures require wet removals to further control dust. During and following the abatement, lead dust, particulates and other residual materials would be vacuumed and filtered out using a high efficiency particulate air (HEPA) filtration system.

LBP would be removed and containerized for off-site landfill disposal as a special or regulated waste. Landfill disposal authorizations would be secured prior to initiating the work. These authorizations are specific to the disposal facility.

Several structural components with that contain lead will remain within the structure including interior load bearing plaster walls, interior window frames, exterior doors/frame, exterior window sills, exterior plaster walls and exterior concrete block walls. These components are to have any peeling paint stabilized and encapsulated. This would be achieved by scraping loose and peeling paint then applying a coat of an encapsulant (similar to Fiberlock Lead Shield).

#### 4.1.1 Effectiveness – Including Climate Change Considerations

The ACM is permanently removed with the exclusion of the plaster wall on the front facade. This approach is technically effective as a definitive and direct physical elimination of the contaminants that produce unacceptable public risk. The remedy usually does not significantly alter structural conditions due to typical ACM uses. However, demolition restrictions would remain following demonstration of clearance criteria due to the remaining asbestos containing plaster on the front of the structure; therefore, follow-up inspections and maintenance will be required.

Potential disadvantages; Disadvantages are minimum; however, errors during the abatement could potentially release asbestos fibers to the environment. This option creates a waste generation stream and associated liabilities for the generator. Some lead-containing paint and the asbestos containing exterior plaster will remain and will need to be managed in place.

The site-specific climate change conditions identified include increased weather activity which could affect building integrity (damaged from storms). Removal of ACM reduces the potential for environmental contamination; however, encapsulation of some paints and ACMs still leaves the potential for environmental contamination with damage.

#### 4.1.2 Implementability

This alternative is technically achievable. It is a mature remedy common in the remediation industry. The approach requires specialized equipment readily available in the local demolition and engineering markets. A specialized labor force exists in South Carolina to accomplish the remedy. The implementation period is shorter-term and can be conducted during any time of the year.

#### 4.1.3 Cost

Based upon Terracon's experience with similar projects, the estimated cost to remove ACM and LBP from the structure is approximately \$30,000, including interim security, professional environmental consulting services, and waste removal and disposal.

### 4.2 **Cleanup Alternative B: ACM and LBP Encapsulation**

Alternative B involves encapsulating the ACM within the structure. Encapsulation is defined as the treatment of ACM with a liquid that covers the surface with a protective covering or embeds the fibers with an adhesive matrix to prevent the release of asbestos fibers. Encapsulation of friable regulated materials is considered an abatement activity. Abatement areas would be contained prior to the encapsulation using polyethylene sheeting, controlled negative pressure conditions and/or other applicable measures to prevent asbestos fiber migration beyond the work zone. Abatement procedures require wet removals of damaged ACM or ACM debris to further control potential spreading of damaged or friable asbestos and airborne particulates. Following the removal of any damaged ACM or ACM debris the ACM would be sprayed with a bridging compound (similar to Fiberlock Asbestos Binding Compound). During and following the abatement, ACM dust, particulates and other residual materials would be vacuumed and filtered out using a high efficiency particulate air (HEPA) filtration system.

ACM would be encapsulated under an SCDHEC-approved permit and any waste generated would be containerized for off-site landfill disposal as a special or regulated waste. Landfill disposal authorizations would be secured prior to initiating the work. These authorizations are specific to the disposal facility.

ACM encapsulation for RACM must be performed by a South Carolina-licensed abatement contractor. In addition, this work requires a 10-business day notification to the SCDHEC Asbestos Section and appropriate coordination with SCDHEC representatives, as needed, throughout the abatement project. An air monitoring program will be required for removal of friable or highly damaged ACM. Final clearance would be granted following a visual examination of the work area followed by receipt of acceptable air quality testing results (for RACM).

ACM encapsulation of non-friable flooring and mastics are not considered a regulated abatement activity as long as the ACM remains intact in a non-friable state. This can be achieved by covering the ACM flooring and mastic with a flowable cement covering and re-caulking windows. This activity does not require an SCDHEC-approved permit or a South Carolina-licensed abatement contractor.

This alternative also involves the Stabilization and encapsulating the LBP within interior and exterior of the structure. This would be achieved by scraping loose and peeling paint then applying a coat of an encapsulant (similar to Fiberlock Lead Shield).

#### 4.2.1 Effectiveness

The ACM and LBP are isolated in a manner in which the ACM and LBP does not come into direct contact with humans. This approach is technically effective as a direct physical elimination of the contaminants available to public exposures. However, follow-up inspections and maintenance would be required. Damaged materials will still require abatement. Additionally, renovation to the structure can potentially

disturb the ACM and LBP and cause a fiber release and /or lead dust contamination. Therefore, based on the current damage and potential disturbance of the ACM and LBP would render this alternative an ineffective option.

Potential disadvantages include errors during the abatement could potentially release asbestos fibers to the environment, covering (encapsulating) materials is not a long term solution and may fail in un-occupied environments. This option still creates a waste generation stream from removal of damaged materials and associated liabilities for the generator. Asbestos and lead-containing paint will remain and will need to be managed in place.

The site-specific climate change conditions identified include increased weather activity which could affect building integrity (damaged from storms). Encapsulation still leaves the asbestos-containing materials and lead-containing paints in place and has the potential for environmental contamination with damage.

#### **4.2.2 Implementability**

This alternative is not technically achievable. Asbestos-containing materials in the structure are significantly damaged and lead-containing paint is not intact in some locations. Damaged materials cannot be encapsulated.

#### **4.2.3 Cost**

Based upon Terracon's experience with similar projects, the estimated cost to encapsulate ACM and LBP from the structure is approximately \$19,000, including interim security, professional environmental consulting services, and waste removal and disposal.

### **4.3 Cleanup Alternative C: No Action**

The "no action" scenario is required by the EPA ABCA process. This alternative is to not address contaminants and trust that exposures as airborne particulate/fibers or dust through further weathering and degradation of the structure does not make contaminants available for human exposure by inhalation.

#### **4.3.1 Effectiveness**

This alternative is deemed ineffective and unacceptable for continued Brownfield redevelopment for this Site because:

- It is likely to be considered unacceptable to the community because citizens, nearby workers and construction workers could unknowingly be placed at risk in the future. No-action provides neither remedy nor preventive value to site conditions or in support of improved public health.
- This approach is unacceptable technically in that the microscopic asbestos fibers are known human carcinogens and provide no readily discernable exposure warning mechanism such as odor or other sensory identification. Without an expensive and long-term outdoor air/dust sampling program, there is no ability to identify if and when residual contaminants may be available for exposure.

- The continued presence of ACM and LBP in the building would continue to pose a long-term health risk to the public and also to workers entering the building. The No Action Alternative would make no progress toward achieving the goals of reduction of health risks to the surrounding public and facilitating the demolition of the building for redevelopment.

#### 4.3.2 Implementability

By its definition, taking no action precludes a discussion of implementation. The structure would be left in the unused state in which it currently exists. The identified ACM and LBP would still pose a hazard to those entering the building and asbestos fibers and lead dust would continue to be released to ambient air. The value of the building would continue to decrease due to deterioration.

#### 4.3.3 Cost

By its definition, taking no action precludes a discussion of cost to implement. This cleanup alternative would not include any specific efforts to remove or maintain ACM and LBP in place. There would be no direct cleanup costs associated with this alternative. Further, this alternative may later result in demolition complications, delays and increased demolition costs due to ACM and LBP remaining within the structures. Direct costs associated with the No Action Alternative and associated non-use of the building would consist of providing site security.

Expanded costs could occur if fugitive asbestos is released during future storms or weathering of damaged structures that might result in secondary deposition and contamination of soils. This would impair re-use and value of surrounding property adjacent to the structure.

### 4.4 Cost Comparison of Alternatives

The table below presents a summary of the estimated costs for all alternatives under consideration. There would be no capital cost if the site were to remain as an unused, vacant building.

ALTERNATIVE	CAPITAL COST	ANNUAL COST
A – Pre-renovation ACM & LBP Removal	\$30,000	\$4,000 <sup>‡</sup>
B – ACM & LBP Encapsulation	\$19,000	\$4,000 <sup>‡</sup>
C – No Action	\$0	\$4,000 <sup>‡</sup>

<sup>‡</sup> - Includes costs for annual re-inspection of ACMs to document current condition.

## 5.0 RECOMMENDED CLEANUP ALTERNATIVE

The recommended cleanup approach is Alternative A: Asbestos and Lead-Based Paint Removal Pre-Renovation. This alternative would address exposure risks using a proven approach consistent with recognized industry standards while at the same time easily garnering SCDHEC approval. This option would remain comparably cost-effective under almost all abatement scenarios and building conditions. ACM removal would not require the need for subsequent inspections, maintenance and/or regulatory oversight. This alternative addresses ACM liabilities, potential contaminant sources or potential limitations to future land use and brownfields redevelopment potential consistent with the Town's goals and re-use planning.

# Analysis of Brownfields Cleanup Alternatives

## DRAFT

### SITE 2 - CENTRAL LAUNDROMAT 703 WEST MAIN STREET CENTRAL, SOUTH CAROLINA

November 30, 2019

Terracon Project No. 86167225

US EPA Cooperative Agreement No.: 00D47116-0

EPA ACRES Property ID No. 229542



Prepared for:

Town of Central  
Central, South Carolina

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# Terracon

Environmental



Facilities



Geotechnical



Materials

## Draft Analysis of Brownfield Cleanup Alternatives Site 2 - Central Laundromat

703 W. Main Street  
Central, South Carolina  
November 30, 2019

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## **1.0 INTRODUCTION AND BACKGROUND**

This Draft Analysis of Brownfield Cleanup Alternatives (ABCA) is in support of evaluating cleanup alternatives and establishing the costs to support the cleanup necessary to support redevelopment of the Former Central Laundromat (Site) located at 703 W. Main Street in Central, Pickens County, South Carolina. The Town of Central (Town) intends to remove the hazardous building materials from the site in support of their goal to raze the current site structure and redevelop the site for reuse as a greenspace, and parking for local businesses and to serve as a catalyst for redevelopment in a blighted neighborhood.

This ABCA is intended to briefly summarize information about the site and contamination issues, cleanup standards, applicable laws, cleanup alternatives considered, and the proposed cleanup, and includes information on the effectiveness, the ability of the grantee to implement each alternative, the cost of each proposed cleanup alternative, an evaluation of how commonly accepted climate change conditions might impact proposed cleanup alternatives, and an analysis of the reasonableness of the various cleanup alternatives considered, including the one chosen. The ABCA is intended as a brief preliminary document summarizing the larger and more detailed technical and financial evaluations performed in addressing each of these areas. The ABCA may be modified technically and financially or in more depth relative to each of these areas upon award of funding and in response to community interaction.

Cleanup alternatives were evaluated in accordance with EPA Region 4 protocols and general guidance required prior to implementation of a cleanup design using EPA Brownfields Grant funding. More specifically, this ABCA summarizes viable cleanup alternatives based on site-specific conditions, technical feasibility, resiliency to climate change conditions, and preliminary cost/benefit analyses. Specific cleanup alternatives and associated recommendations are presented in the applicable sections of this report.

### **1.1 Background**

The site is located at 703 West Main Street in Central, Pickens County, South Carolina. Based on a property report from the Pickens County website, the site consists of one parcel identified as Pickens County Parcel No. 4065-10-35-7521 with a total area of approximately 0.39 acres. The site was an undeveloped partially wooded parcel from at least 1938 to 1947. Since at least 1951, the southern portion of the site was depicted as a used car sales lot. The northern portion in the site has been developed with an approximate 1,360 sq. ft. former laundromat structure since at least 1965. The laundromat building consists of masonry block and preformed concrete roof trusses and deck construction with built-up asphalt roofing. The building consisted of a laundromat area with coin operated washers and dryers and a mechanical closet that contained a natural gas fueled water heater. No dry-cleaning operations were conducted at the site. The Site is currently vacant.

### **1.2 Site Assessment Findings**

A 2018 Phase I ESA completed prior to the Town's acquisition of the property identified the following RECs: potential groundwater impacts associated with the upgradient Central Garage Property, a debris pile containing building debris and machine parts, and the approximately 30 automobiles in various states of disrepair that were once located on site. Prior to its acquisition of the property, the Town enrolled the site into the SCDHEC VCP and subsequently completed a Phase II ESA in accordance with an SCDHEC and

US EPA approved SS-QAPP. The Phase II ESA identified no impacts to soil, groundwater, or soil gas that warrant corrective action.

On February 27, 2017, Terracon completed a Hazardous Material Survey on the site. The hazardous material survey identified asbestos in sprayed-applied ceiling texture on the interior and exterior precast concrete ceiling panels, window caulking, and roof edge flashing. Lead-containing paint was identified in samples of several paint systems present throughout the structure. Samples of white paint on the exterior concrete canopy, red paint on the exterior metal brick lintel and white paint on the exterior metal roof cap of the laundromat contained lead at concentrations in excess of 0.06% (by weight) or 0.7 mg/cm<sup>2</sup> which is the criterion for classification as “lead-based paint” in South Carolina.

The Survey Report recommended that that identified asbestos-containing materials (ACM) be removed by a South Carolina licensed asbestos abatement contractor prior to demolition of the structure and that third-party asbestos air monitoring be performed during the abatement of the friable materials. Preparation of an asbestos removal work plan is also required in South Carolina when quantities of ACM scheduled for removal exceed 3,000 square feet. Materials containing less than 1% asbestos were also recommend for removal by a licensed abatement contractor, as these materials have a potential of worker exposure when disturbed. The following table provides a summary of the asbestos results that were identified in the structure.

Description	Analytical Result	Location	Condition	Estimated Quantity
Ceiling Texture	2% Chrysotile	Interior and Exterior Precast Concrete Ceiling	Damaged	3,800 s.f.
White Window Caulking	0.81% Anthophyllite	Laundromat Exterior	Damaged	3 s.f.
Edge Flashing	0.074% Anthophyllite	Laundromat Roof	Good	400 s.f.
Window Caulking	8% Chrysotile	Storage Building	Good	Storage Building Removed from Site

Paints were found to be lead-containing and Terracon recommended that all paint systems be managed as “lead-containing” and that the proposed waste disposal facility be notified for pre-approval prior to the material being shipped offsite.

## 2.0 PROJECT GOAL AND RE-USE PLAN

The Town of Central has purchased the site with the intention to of redeveloping as an aid in the revitalization of the down town area of the Town. The plan for the site is to remove the existing laundromat structure and redeveloping the site as a greenspace that can be utilized for parking for local businesses and there is potential plan to include a new bus stop (serviced by Clemson Area Transit) at the site, furthermore the will potentially be connected to the future Green Crescent trail.

EPA brownfield cleanup funding will be used to abate ACM from the site structure prior to demolition using other funding sources. This allows immediate and definitive resolution of the public health issue, while final demolitions can then proceed on a schedule that time and resources allows without worry or expense of

maintaining and isolating damaged materials from public exposure. Throughout demolition, all paint systems will be managed and disposed of as “lead-containing.”

### **3.0 APPLICABLE REGULATIONS AND CLEANUP STANDARDS**

The regulated contaminant of concern for remedy is asbestos. Asbestos is the name given to a group of six different fibrous minerals that occur naturally in the environment. Asbestos minerals have separable long fibers that are strong and flexible enough to be spun and woven and are heat resistant. Because of these characteristics, asbestos has been used for a wide range of manufactured goods, mostly in building, friction products, heat-resistant fabrics, packaging, gaskets, and coatings. Asbestos fibers can enter the air or water from the breakdown of natural deposits and manufactured asbestos products. Asbestos fibers do not evaporate into air or dissolve in water. Small diameter fibers and particles may remain suspended in air for a long time and be carried long distances by wind or water before settling down. Larger diameter fibers and particles tend to settle more quickly. Asbestos fibers are not able to move through soil. Asbestos fibers are generally not broken down to other compounds and will remain virtually unchanged over long periods. Exposure to asbestos usually occurs by breathing contaminated air in workplaces that make or use asbestos. Asbestos is also found in the air of buildings containing asbestos that are being torn down or renovated. Asbestos exposure can cause serious lung problems and cancer. More detailed information on asbestos is attached as the Agency for Toxic Substance and Disease Registry's ToxFAQ<sup>TM</sup> for Asbestos.

Lead-based paint (LBP) is regulated by the EPA and SCDHEC for removal and disposal purposes. The EPA defines LBP as paint, varnish, stain, or other applied coating that contains lead equal to or greater than 1.0 mg/cm<sup>2</sup>, 5,000 mg/kg, or 0.5% by dry weight as determined by laboratory analysis. The SCDHEC regulations require that painted demolition debris with a lead concentration greater than 0.06% by weight or 0.7 milligrams per square centimeter (mg/cm<sup>2</sup>) be disposed in a permitted Class II or Class III landfill. Paint systems were observed to be in good condition during a November 2014 survey performed by Terracon. Since the redevelopment plan for the Site includes complete demolition of the onsite structure it is not required to abate or encapsulate the LBP-coated materials provided that the paint is left intact on the substrate. Therefore, although lead-containing paint is present on the Site, it is not considered to be a contaminant of concern.

#### **3.1 Cleanup Responsibility**

The Town of Central will be the cooperative agreement recipient responsible for hiring contractors. The Town will use a qualified Environmental Professional to assist with contracting documents, cleanup contractor oversight and final documentation. The cleanup will be conducted by an asbestos abatement contractor licensed in the State of South Carolina. A demolition permit will be obtained from the South Carolina Department of Environmental Control (SCDHEC) and local agencies. Applicable documentation will be submitted as required to the SCDHEC.

### **3.2 Cleanup Standards**

The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to demolition or renovation activity. Under NESHAP, asbestos-containing building materials are classified as either friable, Category I non-friable or Category II non-friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Category I non-friable ACM includes packing materials, gaskets, resilient floor coverings and asphalt roofing products containing more than 1 percent (%) asbestos. Category II non-friable ACM are non-friable materials other than Category I materials that contain more than 1% asbestos.

Friable ACM, Category I and Category II non-friable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and which could be crushed or pulverized during anticipated demolition activities are considered regulated ACM (RACM). RACM must be removed prior to renovation or demolition activities.

In the state of South Carolina, asbestos activities are regulated by the Department of Health and Environmental Control (SCDHEC) under the SCDHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects. The SCDHEC requires that any asbestos-related activity conducted in a public building be performed by personnel licensed by the SCDHEC. The owner or operator must provide the SCDHEC with written notification of planned abatement and removal activities prior to the commencement of those activities. The SCDHEC requires four day notification for non-friable projects and 10 day notification for RACM projects. Asbestos abatement must be performed by SCDHEC-licensed asbestos abatement contractors. A SCDHEC-licensed Project Designer shall prepare a written abatement design for each abatement project involving the removal of greater than 3,000 square, 1,500 linear, or 656 cubic feet of RACM. Third-party air monitoring must be conducted during the abatement of friable (regulated) ACM. The SCDHEC asbestos regulations can be found at <http://www.scdhec.gov>.

Standards have been established by the Occupational Safety and Health Administration (OSHA) to limit exposure of workers in the workplace and establish work standards for asbestos and lead. The occupational exposure limits are as follows:

- Asbestos Excursion Limit (excursion limit of 30 minutes): 1.0 f/cc (fibers per cubic centimeter as detected using phase contrast microscopy).
- Asbestos PEL (8-hour time-weighted average permissible exposure level): 0.1 f/cc.
- Lead PEL (8-hour time-weighted average permissible exposure level): 50 µg/m<sup>3</sup>

These standards may be found at <http://www.osha.gov>.

### **3.3 Laws & Regulations Applicable to the Cleanup**

Asbestos is regulated by the AHERA, the Toxic Substance Control Act (TSCA), the Clean Air Act (CAA), and the SCDHEC R.61-86.1. Further, to protect asbestos abatement workers, abatement work must be performed in accordance with OSHA asbestos regulations as promulgated in Title 29 of the CFR, Section 1926.1101. The following work practices should be followed prior to the initiation of demolition activities on

the project site:

- Prepare abatement specifications by an SCDHEC licensed Project Designer;
- Notify the SCDHEC of intention to demolish by the required notification form and receive approval for abatement activities;
- Remove all ACM from facility being demolished before disruptive activity begins;
- Handle and dispose of ACM in an approved manner (USEPA, 2006a: Asbestos/NESHAP Regulated Asbestos-Containing Materials Abatement and SC R.61-86.1);
- Comply with applicable OSHA standards;
- Perform third-party asbestos air monitoring prior to, during, and at the conclusion of the abatement activities by an SCDHEC licensed asbestos Air Sampler; and,
- Prepare an asbestos abatement and air monitoring report at the conclusion of the project.

#### **4.0 EVALUATION OF CLEANUP ALTERNATIVES**

Asbestos is considered a hazardous substance relative to cleanup grant funding. EPA proposal guidance requires the ABCA, at a minimum, to consider two different cleanup remedies and a “no action” alternative. Asbestos mitigation in the environmental industry is an established practice. Due to its chemical and physical nature, asbestos can, generally speaking, only be managed. Unlike chemical contamination, it cannot be readily altered or broken down. The industry has historically evolved two basic approaches: removal with off-site management and in-place isolation and on-site management.

In addition to effectiveness, implementability, and cost considerations, consideration was given to the sustainability of cleanup alternatives in regard to current and future climate change concerns. According to the National Oceanic and Atmospheric Administration’s (NOAA) National Climate Assessment, the primary climate change conditions identified for the southeast region include increased weather activity. Increased weather activity has been identified as site-specific climate change considerations and the resiliency of each cleanup alternative will be evaluated against these considerations.

##### **Cleanup Alternatives Considered**

To address hazardous substances at the Site, three different alternatives were considered. These alternatives are outlined below. The following subsections present each alternative in greater detail, including estimated costs and potential contingency items:

- Cleanup Alternative A: ACM Removal Pre-Demolition
- Cleanup Alternative B: ACM Disposal Post-Demolition (demolish in place)
- Cleanup Alternative C: No Action

##### **4.1 Cleanup Alternative A: Pre-Demolition ACM Removal**

Alternative A includes conventional removal/abatement of ACMs using standard industry practices. Abatement areas would be contained prior to the removal using polyethylene sheeting, controlled negative pressure conditions and/or other applicable measures to prevent asbestos fiber migration beyond the work

zone. Abatement procedures require wet removals to further control potential spreading of damaged or friable asbestos and airborne particulates. During and following the abatement, ACM dust, particulates and other residual materials would be vacuumed and filtered out using a high efficiency particulate air (HEPA) filtration system.

ACM would be removed under an SCDHEC-approved permit and containerized for off-site landfill disposal as a special or regulated waste. Waste will be containerized (commonly double bagged) to contain ACM in manageable quantities. Leak-tight containers may also be used. Landfill disposal authorizations would be secured prior to initiating the work. These authorizations are specific to the disposal facility.

ACM removal must be performed by a South Carolina-licensed abatement contractor. In addition, this work requires a 10 business day notification to the SCDHEC Asbestos Section and appropriate coordination with SCDHEC representatives, as needed, throughout the abatement project. An air monitoring program will be required for removal of friable or highly damaged ACM, termed regulated asbestos-containing materials (RACM). Final clearance would be granted following a visual examination of the work area followed by receipt of acceptable air quality testing results (for RACM).

#### 4.1.1 Effectiveness – Including Climate Change Considerations

The ACM is permanently removed. This approach is technically effective as a definitive and direct physical elimination of the contaminants that produce unacceptable public risk. The remedy usually does not significantly alter structural conditions due to typical ACM uses. Demolition restrictions would not remain following demonstration of clearance criteria. Excluding clearance sampling, follow-up inspections and maintenance will not be required. With removal and off-site disposal of contaminants, the approach requires no special post-remedy institutional or land use controls for the property.

Potential disadvantages; Disadvantages are minimum; however, errors during the abatement could potentially release asbestos fibers to the environment. This option creates a waste generation stream and associated liabilities for the generator. Some lead-contain paint will remain and will need to be managed

The site-specific climate change conditions identified include increased weather activity which could affect building integrity (damaged from storms). Removal of all ACM reduces the potential for environmental contamination; however, encapsulation of some paints still leaves the lead-containing paints in place and has the potential for environmental contamination with damage.

#### 4.1.2 Implementability

This alternative is technically achievable. It is a mature remedy common in the remediation industry. The approach requires specialized equipment readily available in the local demolition and engineering markets. A specialized labor force exists in South Carolina to accomplish the remedy. The implementation period is shorter-term and can be conducted at any time of year.



#### 4.1.3 Cost

Based upon Terracon's experience with similar projects, the estimated cost to remove ACM from the structure is approximately \$57,000, including interim security, professional environmental consulting services, and waste removal and disposal.

### 4.2 **Cleanup Alternative B: ACM Disposal Post-Demolition**

Alternative B involves demolition of structures intact with ACM. Structure debris would be disposed of in a regulated landfill similar to Alternative A. Demolition, handling, loading and transportation will require wetting procedures and air monitoring procedures. In this process it becomes necessary to assume that all structure debris is ACM and must be handled and disposed accordingly.

This approach hinges on structures being unsafe to the extent that the abatement contractor could not safely implement Cleanup Alternative A. This approach will require special approval by SCDHEC. ACM demolition must be performed by a South Carolina licensed abatement contractor. This approach, if approved by SCDHEC, has the positive aspect of accelerating the period of abatement to that of the demolition and disposal.

Adversely, this approach requires special approval by SCDHEC that will be made on a project-specific basis, lengthening the process of abating community risk. The potential for public airborne exposure increases as demolition occurs as the ability to control airborne asbestos becomes limited to the adequacy of wetting procedures. This approach greatly increases the volume of material that must be handled as ACM, thereby taking greater volume from existing capacity of regional landfills. This option also creates a waste generation stream and associated liabilities for the generator.

#### 4.2.1 Effectiveness – Including Climate Change Considerations

The ACM is permanently removed. This approach is technically effective as a definitive and direct physical elimination of the contaminants available to public exposures. Follow-up inspections and maintenance will not be required. With removal and off-site disposal of contaminants, the approach requires no special post-remedy institutional or land use controls for the property.

The site-specific climate change conditions identified include increased weather activity which could affect building integrity (damaged from storms). Removal of all ACM reduces the potential for environmental contamination.

#### 4.2.2 Implementability

This alternative is technically achievable although it does require a work practice variance from SCDHEC. It is a mature remedy common in the remediation industry. The approach requires specialized equipment readily available in the local demolition and engineering markets. A specialized labor force exists in South Carolina to accomplish the remedy. The implementation period is medium-term because it requires all demolition waste to be managed as asbestos-containing or asbestos-contaminated. This option can be conducted during all periods of weather.

#### 4.2.3 Cost

The onsite structure is approximately 2,000 s.f. which would produce approximately 370 cubic yards of total debris<sup>1</sup>. This material would have to be considered ACM for disposal. Using \$125/cubic yard disposal cost of ACM material the disposal cost would be approximately \$46,250 (based on Terracon's experience) the additional costs for labor, equipment, professional environmental consulting services increases the total cost to \$75,750. Additionally, in order to perform this task the contractor would require to obtain and maintain approval of a work practice variance from SCDHEC for this option. Comparatively, this alternative is cost-prohibitive and may not be approved by SCDHEC.

### 4.3 **Cleanup Alternative C: No Action**

The "no action" scenario is required by the EPA ABCA process. This alternative is to not address contaminants and trust that exposures as airborne particulate/fibers or dust through further weathering and degradation of the structure does not make contaminants available for human exposure by inhalation.

#### 4.3.1 Effectiveness

This alternative is deemed ineffective and unacceptable for continued Brownfield redevelopment for this Site because:

- It is likely to be considered unacceptable to the community because citizens, nearby workers and construction workers could unknowingly be placed at risk in the future. The ACM is currently damaged and is located on the exterior as well as interior of the building. No-action provides neither remedy nor preventive value to site conditions or in support of improved public health.
- This approach is unacceptable technically in that the microscopic asbestos fibers are known human carcinogens and provide no readily discernable exposure warning mechanism such as odor or other sensory identification. Without an expensive and long-term outdoor air/dust sampling program, there is no ability to identify if and when residual contaminants may be available for exposure.
- The continued presence of ACM in the building would continue to pose a long-term health risk to the public and also to workers entering the building. The No Action Alternative would make no progress toward achieving the goals of reduction of health risks to the surrounding public and facilitating the demolition of the building for redevelopment.

#### 4.3.2 Implementability

By its definition, taking no action precludes a discussion of implementation. The structure would be left in the unused state in which it currently exists. The identified ACM would still pose a hazard to those entering the building and asbestos fibers would continue to be released to ambient air. The value of the building would continue to decrease due to deterioration. Regardless, the presence of ACM will require the Town to have to continue to use portions of its maintenance budgets to stabilize ACM damage through covering open breaches into the structure and isolation of building from unauthorized entry.

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<sup>1</sup> Debris Estimating Field Guide - FEMA 329, September 2010. Federal Emergency Management Agency, Department of Homeland Security.

#### 4.3.3 Cost

By its definition, taking no action precludes a discussion of cost to implement. This cleanup alternative would not include any specific efforts to remove or maintain ACM in place. There would be no direct cleanup costs associated with this alternative. Further, this alternative may later result in demolition complications, delays and increased demolition costs due to ACM remaining within the structures. Direct costs associated with the No Action Alternative and associated non-use of the building would consist of providing site security. Indirect costs could include the continuing inability to utilize the property for public benefit as is currently planned.

Expanded costs could occur if fugitive asbestos is released during future storms or weathering of damaged structures that might result in secondary deposition and contamination of soils. This would impair re-use and value of surrounding property adjacent to the structure.

#### 4.4 Cost Comparison of Alternatives

The table below presents a summary of the estimated costs for all alternatives under consideration. There would be no capital cost if the site were to remain as an unused, vacant building.

ALTERNATIVE	CAPITAL COST	ANNUAL COST
A – Pre-Demolition ACM Removal	\$57,000*	N/A
B – ACM Disposal Post-Demolition	\$75,750†	N/A
C – No Action	\$0	\$4,000‡

\* - Estimate does not include costs associated with demolition, only the tasks identified for each alternative.

† - Estimate includes costs for demolition due to the nature of the alternative (total removal).

‡ - Includes costs for annual re-inspection of ACMs to document current condition.

### 5.0 RECOMMENDED CLEANUP ALTERNATIVE

The recommended cleanup approach is Alternative A: Asbestos Removal Pre-Demolition. This alternative would address exposure risks using a proven approach consistent with recognized industry standards while at the same time easily garnering SCDHEC approval. This option would remain comparably cost-effective under almost all abatement scenarios and building conditions. ACM removal would not require the need for subsequent inspections, maintenance and/or regulatory oversight. This alternative addresses ACM liabilities, potential contaminant sources or potential limitations to future land use and brownfields redevelopment potential consistent with the Town's goals and re-use planning.

# Analysis of Brownfields Cleanup Alternatives

## DRAFT

**SITE 3 - PUBLIC HEALTH BUILDING  
225 BROAD STREET  
CENTRAL, SOUTH CAROLINA**

November 30, 2019

Terracon Project No. 86167225

US EPA Cooperative Agreement No.: 00D47116-0

EPA ACRES Property ID No. 239729



**Prepared for:**

Town of Central  
Central, South Carolina

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**Terracon**

Environmental



Facilities



Geotechnical



Materials

## Draft Analysis of Brownfield Cleanup Alternatives Site 3 - Public Health Building

225 Broad Street  
Central, South Carolina  
November 30, 2019

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## **1.0 INTRODUCTION AND BACKGROUND**

This Draft Analysis of Brownfield Cleanup Alternatives (ABCA) is in support of evaluating cleanup alternatives and establishing the costs to support the cleanup necessary to support redevelopment of the Former Public Health Building (Site) located at 225 Broad Street in Central, Pickens County, South Carolina. The Town of Central (Town) intends to remove the hazardous building materials from the site in support of their goal to renovate the current site structure and reused as headquarters for Central's recently formed Main Street Program and the remaining portions of the site will be parking with trail access to the Town's adjoining athletic fields.

This ABCA is intended to briefly summarize information about the site and contamination issues, cleanup standards, applicable laws, cleanup alternatives considered, and the proposed cleanup, and includes information on the effectiveness, the ability of the grantee to implement each alternative, the cost of each proposed cleanup alternative, an evaluation of how commonly accepted climate change conditions might impact proposed cleanup alternatives, and an analysis of the reasonableness of the various cleanup alternatives considered, including the one chosen. The ABCA is intended as a brief preliminary document summarizing the larger and more detailed technical and financial evaluations performed in addressing each of these areas. The ABCA may be modified technically and financially or in more depth relative to each of these areas upon award of funding and in response to community interaction.

Cleanup alternatives were evaluated in accordance with EPA Region 4 protocols and general guidance required prior to implementation of a cleanup design using EPA Brownfields Grant funding. More specifically, this ABCA summarizes viable cleanup alternatives based on site-specific conditions, technical feasibility, resiliency to climate change conditions, and preliminary cost/benefit analyses. Specific cleanup alternatives and associated recommendations are presented in the applicable sections of this report.

### **1.1 Background**

The site is located at 225 Broad Street in Central, Pickens County, South Carolina. Based on a property report from the Pickens County website, the site consists of one parcel identified as Pickens County Parcel No. 4065-10-46-7714 with a total area of approximately 0.42 acres. The site was depicted as developed in 1938 with two former structures (presumably residential). The site was depicted as a vacant lot in 1947. The site has been developed with the current structure since the 1950s to the present. The Site is currently vacant.

### **1.2 Site Assessment Findings**

A June 2019 Phase I ESA identified the potential presence of a heating oil UST which was confirmed with a ground penetrating radar (GPR) survey. Additional assessment, which includes the removal of the heating oil UST is planned for early 2020. If a release is identified during removal, the Town intends to complete corrective measures utilizing the SCDHEC State Underground Petroleum Environmental Response Bank (SUPERB) and Town funding, if needed.

In conjunction with the Phase I ESA, Terracon completed an Asbestos and Lead-Based Paint Survey on the site. The hazardous material survey identified regulated quantities of asbestos in floor tile and associated



mastic, and residual mastic on the interior, steam piping insulation and debris, boiler door insulation and boiler door gaskets in the boiler room and exterior window caulking, window glazing compound and pitch pockets. Lead-containing paint was identified in samples of several paint systems present throughout the structure. Samples of white paint on the interior plaster, white paint on the interior door and door frame, green and black ceramic tile, orange paint on the interior structural steel, tan paint on the exterior door frame and brown paint on the exterior structural steel contained lead at concentrations in excess of 0.7 mg/cm<sup>2</sup> which is the criterion for classification as “lead-based paint” in South Carolina.

The Survey Report recommended that that identified asbestos containing materials (ACM) be removed by a South Carolina licensed asbestos abatement contractor prior to demolition of the structure and that third-party asbestos air monitoring be performed during the abatement of the friable materials. Preparation of an asbestos removal work plan was also recommended. Additionally, Terracon recommended that all paint systems be managed as “lead-containing” and that the proposed waste disposal facility be notified for pre-approval prior to the material being shipped offsite.

The following table provides a summary of the ACM that were identified in the structure.

<b>Description</b>	<b>Analytical Result</b>	<b>Location</b>	<b>Condition</b>	<b>Estimated Quantity</b>
9" Red Floor Tile and Black Mastic	Tile - 10% Chrysotile Mastic - 5% Chrysotile	Restrooms	Significantly Damaged	40 s.f.
12" Gray Floor Tile and Yellow Mastic	Tile - 8% Chrysotile Mastic - 3% Chrysotile	Back Storage Room	Significantly Damaged	8 s.f.
Residual Black Mastic	10% Chrysotile	Throughout Interior	Good	1,300 s.f.
Steam Piping Insulation and Debris	60% Chrysotile	Boiler Room	Significantly Damaged	35 LF
Boiler Door Insulation	5% Chrysotile	Boiler Room	Significantly Damaged	2 s.f.
Boiler Door Gaskets	65% Chrysotile	Boiler Room	Significantly Damaged	2 units
Window Glazing Compound	0.85% Anthophyllite	Exterior	Good	10 s.f.
Window Caulking	5% Chrysotile	Exterior	Good	15 s.f.
Pitch Pocket	10% Chrysotile	Boiler Room Roof	Good	4 s.f.

Paints were found to be lead-containing and Terracon recommended that all paint systems be managed as “lead-containing” and that the proposed waste disposal facility be notified for pre-approval prior to the material being shipped offsite.

## **2.0 PROJECT GOAL AND RE-USE PLAN**

The Town of Central owns the site and has the intention to of redeveloping as an aid in the revitalization of the down town area of the Town. The plan for the site is to renovate the existing former Public Health Building structure and reused as headquarters for Central’s recently formed Main Street Program and the remaining portions of the site will be parking with trail access to the Town’s adjoining athletic fields..

EPA brownfield cleanup funding will be used to abate ACM from the site structure prior to renovations using other funding sources. This allows immediate and definitive resolution of the public health issue, while final

renovations can then proceed on a schedule that time and resources allows without worry or expense of maintaining and isolating damaged materials from public exposure. Throughout renovations, all paint systems will be managed and disposed of as “lead-containing.”

### **3.0 APPLICABLE REGULATIONS AND CLEANUP STANDARDS**

The regulated contaminant of concern for remedy is asbestos. Asbestos is the name given to a group of six different fibrous minerals that occur naturally in the environment. Asbestos minerals have separable long fibers that are strong and flexible enough to be spun and woven and are heat resistant. Because of these characteristics, asbestos has been used for a wide range of manufactured goods, mostly in building, friction products, heat-resistant fabrics, packaging, gaskets, and coatings. Asbestos fibers can enter the air or water from the breakdown of natural deposits and manufactured asbestos products. Asbestos fibers do not evaporate into air or dissolve in water. Small diameter fibers and particles may remain suspended in air for a long time and be carried long distances by wind or water before settling down. Larger diameter fibers and particles tend to settle more quickly. Asbestos fibers are not able to move through soil. Asbestos fibers are generally not broken down to other compounds and will remain virtually unchanged over long periods. Exposure to asbestos usually occurs by breathing contaminated air in workplaces that make or use asbestos. Asbestos is also found in the air of buildings containing asbestos that are being torn down or renovated. Asbestos exposure can cause serious lung problems and cancer. More detailed information on asbestos is attached as the Agency for Toxic Substance and Disease Registry’s ToxFAQ™ for Asbestos.

Lead-based paint (LBP) is regulated by the EPA and SCDHEC for removal and disposal purposes. The EPA defines LBP as paint, varnish, stain, or other applied coating that contains lead equal to or greater than 1.0 mg/cm<sup>2</sup>, 5,000 mg/kg, or 0.5% by dry weight as determined by laboratory analysis. The SCDHEC regulations require that painted demolition debris with a lead concentration greater than 0.06% by weight or 0.7 milligrams per square centimeter (mg/cm<sup>2</sup>) be disposed in a permitted Class II or Class III landfill. Paint systems were observed to be in good condition during a June 2019 survey performed by Terracon. Since the redevelopment plan for the Site includes renovations of the onsite structure for commercial use, Terracon recommends that the lead-containing paint that would be disturbed during the renovation of the structure be stabilized and/or removed.

#### **3.1 Cleanup Responsibility**

The Town of Central will be the cooperative agreement recipient responsible for hiring contractors. The Town will use a qualified Environmental Professional to assist with contracting documents, cleanup contractor oversight and final documentation. The cleanup will be conducted by an asbestos abatement contractor licensed in the State of South Carolina. A renovation permit will be obtained from the South Carolina Department of Environmental Control (SCDHEC) and local agencies. Applicable documentation will be submitted as required to the SCDHEC.

### **3.2 Cleanup Standards**

The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to demolition or renovation activity. Under NESHAP, asbestos-containing building materials are classified as either friable, Category I non-friable or Category II non-friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Category I non-friable ACM includes packing materials, gaskets, resilient floor coverings and asphalt roofing products containing more than 1 percent (%) asbestos. Category II non-friable ACM are non-friable materials other than Category I materials that contain more than 1% asbestos.

Friable ACM, Category I and Category II non-friable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and which could be crushed or pulverized during anticipated demolition activities are considered regulated ACM (RACM). RACM must be removed prior to renovation or demolition activities.

In the state of South Carolina, asbestos activities are regulated by the Department of Health and Environmental Control (SCDHEC) under the SCDHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects. The SCDHEC requires that any asbestos-related activity conducted in a public building be performed by personnel licensed by the SCDHEC. The owner or operator must provide the SCDHEC with written notification of planned abatement and removal activities prior to the commencement of those activities. The SCDHEC requires four day notification for non-friable projects and 10 day notification for RACM projects. Asbestos abatement must be performed by SCDHEC-licensed asbestos abatement contractors. A SCDHEC-licensed Project Designer shall prepare a written abatement design for each abatement project involving the removal of greater than 3,000 square, 1,500 linear, or 656 cubic feet of RACM. Third-party air monitoring must be conducted during the abatement of friable (regulated) ACM. The SCDHEC asbestos regulations can be found at <http://www.scdhec.gov>.

Standards have been established by the Occupational Safety and Health Administration (OSHA) to limit exposure of workers in the workplace and establish work standards for asbestos and lead. The occupational exposure limits are as follows:

- Asbestos Excursion Limit (excursion limit of 30 minutes): 1.0 f/cc (fibers per cubic centimeter as detected using phase contrast microscopy).
- Asbestos PEL (8-hour time-weighted average permissible exposure level): 0.1 f/cc.
- Lead PEL (8-hour time-weighted average permissible exposure level): 50 µg/m<sup>3</sup>

These standards may be found at <http://www.osha.gov>.

### **3.3 Laws & Regulations Applicable to the Cleanup**

Asbestos is regulated by the AHERA, the Toxic Substance Control Act (TSCA), the Clean Air Act (CAA), and the SCDHEC R.61-86.1. Further, to protect asbestos abatement workers, abatement work must be performed in accordance with OSHA asbestos regulations as promulgated in Title 29 of the CFR, Section 1926.1101. The following work practices should be followed prior to the initiation of demolition activities on

the project site:

- Prepare abatement specifications by an SCDHEC licensed Project Designer;
- Notify the SCDHEC of intention to demolish by the required notification form and receive approval for abatement activities;
- Remove all ACM from facility being demolished before disruptive activity begins;
- Handle and dispose of ACM in an approved manner (USEPA, 2006a: Asbestos/NESHAP Regulated Asbestos-Containing Materials Abatement and SC R.61-86.1);
- Comply with applicable OSHA standards;
- Perform third-party asbestos air monitoring prior to, during, and at the conclusion of the abatement activities by an SCDHEC licensed asbestos Air Sampler; and,
- Prepare an asbestos abatement and air monitoring report at the conclusion of the project.

#### **4.0 EVALUATION OF CLEANUP ALTERNATIVES**

Asbestos is considered a hazardous substance relative to cleanup grant funding. EPA proposal guidance requires the ABCA, at a minimum, to consider two different cleanup remedies and a “no action” alternative. Asbestos mitigation in the environmental industry is an established practice. Due to its chemical and physical nature, asbestos can, generally speaking, only be managed. Unlike chemical contamination, it cannot be readily altered or broken down. The industry has historically evolved two basic approaches: removal with off-site management and in-place isolation and on-site management.

In addition to effectiveness, implementability, and cost considerations, consideration was given to the sustainability of cleanup alternatives in regard to current and future climate change concerns. According to the National Oceanic and Atmospheric Administration’s (NOAA) National Climate Assessment, the primary climate change conditions identified for the southeast region include increased weather activity. Increased weather activity has been identified as site-specific climate change considerations and the resiliency of each cleanup alternative will be evaluated against these considerations.

##### **Cleanup Alternatives Considered**

To address hazardous substances at the Site, three different alternatives were considered. These alternatives are outlined below. The following subsections present each alternative in greater detail, including estimated costs and potential contingency items:

- Cleanup Alternative A: ACM and LBP Removal Pre-Renovation
- Cleanup Alternative B: ACM and LBP Encapsulation
- Cleanup Alternative C: No Action

##### **4.1 Cleanup Alternative A: Pre-Renovation ACM and LBP Removal**

Alternative A includes conventional removal/abatement of ACMs using standard industry practices. Abatement areas would be contained prior to the removal using polyethylene sheeting, controlled negative pressure conditions and/or other applicable measures to prevent asbestos fiber migration beyond the work

zone. Abatement procedures require wet removals to further control potential spreading of damaged or friable asbestos and airborne particulates. During and following the abatement, ACM dust, particulates and other residual materials would be vacuumed and filtered out using a high efficiency particulate air (HEPA) filtration system.

ACM would be removed under an SCDHEC-approved permit and containerized for off-site landfill disposal as a special or regulated waste. Waste will be containerized (commonly double bagged) to contain ACM in manageable quantities. Leak-tight containers may also be used. Landfill disposal authorizations would be secured prior to initiating the work. These authorizations are specific to the disposal facility.

ACM removal must be performed by a South Carolina-licensed abatement contractor. In addition, this work requires a 10-business day notification to the SCDHEC Asbestos Section and appropriate coordination with SCDHEC representatives, as needed, throughout the abatement project. An air monitoring program will be required for removal of friable or highly damaged ACM, termed regulated asbestos-containing materials (RACM). Final clearance would be granted following a visual examination of the work area followed by receipt of acceptable air quality testing results (for RACM).

Alternative A also includes conventional removal/abatement of LBP via removal of the interior plaster walls and ceiling and the component removal of lead-containing ceramic wall tiles, interior doors and door frames using standard industry practices; however, LBP will remain on exterior load bearing walls. Abatement areas would be contained prior to the removal using polyethylene sheeting, controlled negative pressure conditions and/or other applicable measures to prevent lead dust migration beyond the work zone. Abatement procedures require wet removals to further control dust. During and following the abatement, lead dust, particulates and other residual materials would be vacuumed and filtered out using a high efficiency particulate air (HEPA) filtration system.

LBP would be removed and containerized for off-site landfill disposal as a special or regulated waste. Landfill disposal authorizations would be secured prior to initiating the work. These authorizations are specific to the disposal facility.

Several structural components with that contain lead will remain within the structure including interior and exterior structural steel, interior load bearing walls, and exterior doors/frames. These components are to have any peeling paint stabilized and encapsulated. This would be achieved by scraping loose and peeling paint then applying a coat of an encapsulant (similar to Fiberlock Lead Shield).

#### 4.1.1 Effectiveness – Including Climate Change Considerations

The ACM is permanently removed. This approach is technically effective as a definitive and direct physical elimination of the contaminants that produce unacceptable public risk. The remedy usually does not significantly alter structural conditions due to typical ACM uses. Demolition restrictions would not remain following demonstration of clearance criteria. Excluding clearance sampling, follow-up inspections and maintenance will not be required. With removal and off-site disposal of contaminants, the approach requires no special post-remedy institutional or land use controls for the property.

Potential disadvantages; Disadvantages are minimum; however, errors during the abatement could

potentially release asbestos fibers to the environment. This option creates a waste generation stream and associated liabilities for the generator. Some lead-contain paint will remain and will need to be managed in place.

The site-specific climate change conditions identified include increased weather activity which could affect building integrity (damaged from storms). Removal of all ACM reduces the potential for environmental contamination; however, encapsulation of some paints still leaves the lead-containing paints in place and has the potential for environmental contamination with damage.

#### 4.1.2 Implementability

This alternative is technically achievable. It is a mature remedy common in the remediation industry. The approach requires specialized equipment readily available in the local demolition and engineering markets. A specialized labor force exists in South Carolina to accomplish the remedy. The implementation period is shorter-term and can be conducted during any time of the year.

#### 4.1.3 Cost

Based upon Terracon's experience with similar projects, the estimated cost to remove ACM and LBP from the structure is approximately \$33,000, including interim security, professional environmental consulting services, and waste removal and disposal.

### 4.2 **Cleanup Alternative B: ACM and LBP Encapsulation**

Alternative B involves encapsulating the ACM within the structure. Encapsulation is defined as the treatment of ACM with a liquid that covers the surface with a protective covering or embeds the fibers with an adhesive matrix to prevent the release of asbestos fibers. Encapsulation of friable regulated materials such as the TSI located in the boiler room of the structure is considered an abatement activity. Abatement areas would be contained prior to the encapsulation using polyethylene sheeting, controlled negative pressure conditions and/or other applicable measures to prevent asbestos fiber migration beyond the work zone. Abatement procedures require wet removals of damaged ACM or ACM debris to further control potential spreading of damaged or friable asbestos and airborne particulates. Following the removal of any damaged ACM or ACM debris the remaining ACM would be sprayed with a bridging compound (similar to Fiberlock Asbestos Binding Compound). During and following the abatement, ACM dust, particulates and other residual materials would be vacuumed and filtered out using a high efficiency particulate air (HEPA) filtration system.

ACM would be encapsulated under an SCDHEC-approved permit and any waste generated would be containerized for off-site landfill disposal as a special or regulated waste. Landfill disposal authorizations would be secured prior to initiating the work. These authorizations are specific to the disposal facility.

ACM encapsulation for RACM must be performed by a South Carolina-licensed abatement contractor. In addition, this work requires a 10-business day notification to the SCDHEC Asbestos Section and appropriate coordination with SCDHEC representatives, as needed, throughout the abatement project. An air monitoring program will be required for removal of friable or highly damaged ACM. Final clearance would be granted following a visual examination of the work area followed by receipt of acceptable air quality testing results (for RACM).



ACM encapsulation of non-friable flooring and mastics are not considered a regulated abatement activity as long as the ACM remains intact in a non-friable state. This can be achieved by covering the ACM flooring and mastic with a flowable cement covering and re-caulking windows. This activity does not require an SCDHEC-approved permit or a South Carolina-licensed abatement contractor.

This alternative also involves the Stabilization and encapsulating the LBP within the structure. This would be achieved by scraping loose and peeling paint then applying a coat of an encapsulant (similar to Fiberlock Lead Shield).

#### 4.2.1 Effectiveness– Including Climate Change Considerations

The ACM and LBP are isolated in a manner in which the ACM and LBP does not come into direct contact with humans. This approach is technically effective as a direct physical elimination of the contaminants available to public exposures. However, follow-up inspections and maintenance would be required. Damaged materials will still require abatement. Additionally, renovation to the structure can potentially disturb the ACM and LBP and cause a fiber release and /or lead dust contamination. Therefore, based on the current damage and potential disturbance of the ACM and LBP would render this alternative an ineffective option.

Potential disadvantages include errors during the abatement could potentially release asbestos fibers to the environment, covering (encapsulating) materials is not a long-term solution and may fail in un-occupied environments. This option still creates a waste generation stream from removal of damaged materials and associated liabilities for the generator. Asbestos and lead-containing paint will remain and will need to be managed in place.

The site-specific climate change conditions identified include increased weather activity which could affect building integrity (damaged from storms). Encapsulation still leaves the asbestos-containing materials and lead-containing paints in place and has the potential for environmental contamination with damage.

#### 4.2.2 Implementability

This alternative is not technically achievable. Asbestos-containing materials in the structure are significantly damaged and lead-containing paint is not intact in some locations. Damaged materials cannot be encapsulated.

#### 4.2.3 Cost

Based upon Terracon's experience with similar projects, the estimated cost to encapsulate ACM and LBP from the structure is approximately \$20,000, including interim security, professional environmental consulting services, waste removal and disposal and encapsulation.

### 4.3 Cleanup Alternative C: No Action

The “no action” scenario is required by the EPA ABCA process. This alternative is to not address contaminants and trust that exposures as airborne particulate/fibers or dust through further weathering and degradation of the structure does not make contaminants available for human exposure by inhalation.

#### 4.3.1 Effectiveness

This alternative is deemed ineffective and unacceptable for continued Brownfield redevelopment for this Site because:

- It is likely to be considered unacceptable to the community because citizens, nearby workers and construction workers could unknowingly be placed at risk in the future. No-action provides neither remedy nor preventive value to site conditions or in support of improved public health.
- This approach is unacceptable technically in that the microscopic asbestos fibers are known human carcinogens and provide no readily discernable exposure warning mechanism such as odor or other sensory identification. Without an expensive and long-term outdoor air/dust sampling program, there is no ability to identify if and when residual contaminants may be available for exposure.
- The continued presence of ACM and LBP in the building would continue to pose a long-term health risk to the public and also to workers entering the building. The No Action Alternative would make no progress toward achieving the goals of reduction of health risks to the surrounding public and facilitating the demolition of the building for redevelopment.

#### 4.3.2 Implementability

By its definition, taking no action precludes a discussion of implementation. The structure would be left in the unused state in which it currently exists. The identified ACM and LBP would still pose a hazard to those entering the building and asbestos fibers and lead dust would continue to be released to ambient air. The value of the building would continue to decrease due to deterioration.

#### 4.3.3 Cost

By its definition, taking no action precludes a discussion of cost to implement. This cleanup alternative would not include any specific efforts to remove or maintain ACM and LBP in place. There would be no direct cleanup costs associated with this alternative. Further, this alternative may later result in demolition complications, delays and increased demolition costs due to ACM and LBP remaining within the structures. Direct costs associated with the No Action Alternative and associated non-use of the building would consist of providing site security.

Expanded costs could occur if fugitive asbestos is released during future storms or weathering of damaged structures that might result in secondary deposition and contamination of soils. This would impair re-use and value of surrounding property adjacent to the structure.

### 4.4 Cost Comparison of Alternatives

The table below presents a summary of the estimated costs for all alternatives under consideration. There would be no capital cost if the site were to remain as an unused, vacant building.

ALTERNATIVE	CAPITAL COST	ANNUAL COST
A – Pre-renovation ACM & LBP Removal	\$35,000	N/A
B – ACM & LBP Encapsulation	\$20,000	\$4,000 <sup>‡</sup>
C – No Action	\$0	\$4,000 <sup>‡</sup>

<sup>‡</sup> - Includes costs for annual re-inspection of ACMs to document current condition.

## 5.0 RECOMMENDED CLEANUP ALTERNATIVE

The recommended cleanup approach is Alternative A: Asbestos and Lead-Based Paint Removal Pre-Renovation. This alternative would address exposure risks using a proven approach consistent with recognized industry standards while at the same time easily garnering SCDHEC approval. This option would remain comparably cost-effective under almost all abatement scenarios and building conditions. ACM removal would not require the need for subsequent inspections, maintenance and/or regulatory oversight. Although lead-containing paint will remain, most will be removed. The remaining paint would have a minimal impact with future site development. This alternative addresses ACM liabilities, potential contaminant sources or potential limitations to future land use and brownfields redevelopment potential consistent with the Town's goals and re-use planning.

## Application for Federal Assistance SF-424

\* 1. Type of Submission:

- ☐ Preapplication  
☒ Application  
☐ Changed/Corrected Application

\* 2. Type of Application:

- ☒ New  
☐ Continuation  
☐ Revision

\* If Revision, select appropriate letter(s):

\* Other (Specify):

\* 3. Date Received:

12/02/2019

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

### 8. APPLICANT INFORMATION:

\* a. Legal Name:

Town of Central

\* b. Employer/Taxpayer Identification Number (EIN/TIN):

57-6001009

\* c. Organizational DUNS:

3616877470000

d. Address:

\* Street1:

1067 W Main Street

Street2:

\* City:

Central

County/Parish:

Pickens

\* State:

SC: South Carolina

Province:

\* Country:

USA: UNITED STATES

\* Zip / Postal Code:

29630-9229

e. Organizational Unit:

Department Name:

Administration

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

Mr.

\* First Name:

Phillip

Middle Name:

\* Last Name:

Mishoe

Suffix:

Title:

City Administrator

Organizational Affiliation:

\* Telephone Number:

8646396381

Fax Number:

\* Email:

pmishoe@cityofcentral.org

## Application for Federal Assistance SF-424

### \* 9. Type of Applicant 1: Select Applicant Type:

C: City or Township Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

\* Other (specify):

### \* 10. Name of Federal Agency:

Environmental Protection Agency

### 11. Catalog of Federal Domestic Assistance Number:

66.818

CFDA Title:

Brownfields Assessment and Cleanup Cooperative Agreements

### \* 12. Funding Opportunity Number:

EPA-OLEM-OBLR-19-07

\* Title:

FY20 GUIDELINES FOR BROWNFIELD CLEANUP GRANTS

### 13. Competition Identification Number:

Title:

### 14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

### \* 15. Descriptive Title of Applicant's Project:

FY20 EPA Brownfield Cleanup Grant Town of Central, SC

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

**Application for Federal Assistance SF-424****16. Congressional Districts Of:**\* a. Applicant \* b. Program/Project 

Attach an additional list of Program/Project Congressional Districts if needed.

**17. Proposed Project:**\* a. Start Date: \* b. End Date: **18. Estimated Funding (\$):**

* a. Federal	<input type="text" value="149,337.50"/>
* b. Applicant	<input type="text" value="29,867.50"/>
* c. State	<input type="text" value="0.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="0.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="179,205.00"/>

**\* 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

- ☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .
- ☒ b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- ☐ c. Program is not covered by E.O. 12372.

**\* 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**☐ Yes ☒ No

If "Yes", provide explanation and attach

**21. \*By signing this application, I certify (1) to the statements contained in the list of certifications\*\* and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances\*\* and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ \*\* I AGREE

\*\* The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

**Authorized Representative:**

Prefix:  \* First Name:

Middle Name:

\* Last Name:

Suffix:

\* Title: \* Telephone Number:  Fax Number: \* Email: \* Signature of Authorized Representative:  \* Date Signed: